JORDAN RESERVOIR
MANAGEMENT REPORT

2004 - 2005

Prepared by

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Introduction

Jordan Reservoir was previously sampled in 1987, 1990, 1992, 1995, 1999, and 2002 according to the management program guidelines (Alabama Reservoir Management Manual 1999). There are excellent fisheries for spotted bass and largemouth bass, while the crappie fishery is often limited by poor recruitment. Hybrid striped bass are stocked at low densities to provide an additional fishery.

Methods

Jordan Reservoir was sampled during Fall 2004 by gill-netting (hybrid striped bass and white bass) and trap-netting (black crappie), and during Spring 2005 by electrofishing (bluegill, gizzard shad, largemouth bass, spotted bass, and threadfin shad). Trap-netting consisted of 60 net-nights of effort between November 15 and November 18, 2005 (Figure 1). Gill-netting consisted of 10 net-nights of effort between January 3 and January 5, 2005, using standardized experimental gill-nets set near the bottom, perpendicular to shore (Figure 2). Between April 11 and April 15, 2005, 10 sites were sampled by day electrofishing for 30 minutes each (Figure 2). Gear consisted of a boat-mounted, Smith-Root model 5.0 GPP, 11 hp Honda generator, and boom-mounted electrodes used to deliver up to 1,008 volts of pulsed direct current.

Total length (mm) and weight (g) were recorded for all target species. Otoliths were used to determine ages of black crappie, hybrid striped bass, largemouth bass, spotted bass, striped bass, white bass, and white crappie.

Organization of this report is such that all of the information collected in 2004-2005 is not cited in the following discussion. Examination of this report should include a careful review of the Appendix.

Results and Discussion

The largemouth bass and spotted bass populations in Jordan Reservoir have been relatively stable from 1987 to 2005 (Table 5). Combined catch rates varied between 60.6 and 95.8 fish per hour over that period, and was 76.4 fish per hour during Spring 2005. The differences in size structure probably reflect variable year-class strength. Although growth of largemouth bass through age-1 was poor (Table 6), they quickly surpassed the statewide upper 90th percentile during their second year of life (Figure 6) and often met or exceeded statewide maximum total lengths-at-age (Alabama Reservoir Management Manual 1999). Growth of spotted bass was even more phenomenal (Table 7), with all but one year-class exceeding statewide maximum total lengths-at-age (Figure 10). Relative weights of largemouth bass exceeded 91% in all size groups, and were slightly lower than the lake wide average in each category. Relative weights of spotted bass were in line with the lake wide average, ranging from 97% for stock-size fish to 109% for memorable-size fish. This fishery is limited by recruitment, with relatively weak year-class production in most years, but with excellent growth and condition of adult fish. The estimated annual mortality of largemouth bass between the ages of 2 and 11 averaged 40%. Annual mortality of spotted bass could not be estimated due to variable recruitment.

Review of the 2004 B.A.I.T. data indicated that Jordan Reservoir has consistently provided some of the best bass fishing in Alabama. Anglers reported catching at least one fish during 72% of their trips. Average fish weight (1.98 pounds), bass per angler-day (2.16), and weight per angler-day (4.28 pounds) were all good. A ranking of quality indicators placed Jordan Reservoir 8th among all reservoirs statewide.

There is strong angler support for a black bass minimum size limit on Jordan Reservoir (McHugh et al. 1997, 1998), and data suggests a moderate size limit (such as 14 inches) would protect fish younger than age-3, theoretically improving size structure, fish abundance, and buffering year-class variation. However, angling is consistently excellent on this reservoir (Haffner 2005; Nichols and McHugh 2003, 2002, 2001, 2000; Cook and McHugh 1999, 1998) and due to the practice of catch-and-release; harvest of black bass is near zero (McHugh et al. 2002). Thus, harvest restrictions would likely do little to improve the fishery and might reduce growth and condition.

The black crappie population of Jordan Reservoir has historically been characterized by extremely variable year-class production, with moderate year-classes being produced in some years, and in other years the spawn fails almost entirely. Previous sampling on Jordan and Mitchell Reservoirs identified abundant year-classes in 1987, 1990, 1993, and 1996 (Jernigan et al. 1999, McHugh et al. 1998). A relatively strong year-class was produced in 2001 which dominated the Fall 2004 black crappie collection (Table 8). No fish from the 2000, 1999, and 1998 year-classes were represented in the sample. The annual mortality estimate could not be calculated due to variable recruitment.

Seasonal rainfall patterns have been documented to affect crappie year-class strength (Maceina and Stimpert 1998) and these same conditions also apparently impact white bass. Table 14 summarizes all of the black crappie and white bass collections from Jordan Reservoir for 1992 through 2005. Because it has traditionally been difficult to collect age-0 crappie in lower Coosa River impoundments using fall trap-netting (Higginbotham et al. 1993; McHugh et al. 1996; Jernigan et al. 1999; Abernethy et al. 2004; McHugh et al. 2001; McHugh et al. 1998; McHugh et al. 1991[a]; McHugh et al. 1991[b]), white bass year-class strength may be used as an index of crappie year-class strength. Based upon the numbers of age-0 white bass present in the Fall 2001 sample, McHugh et al. (2002) speculated correctly that a strong black crappie year-class may have been produced.

Catch-rates of Morone spp. in Fall 2004 gill-netting samples were poor (Tables 9, 10, and 11). A total of 18 fish were collected during 10 net-nights of sampling. All four hybrid striped bass were from the 2003 year-class, and exhibited good growth. Beginning in 2001, the hybrid striped bass stocking rate was increased from 4.0 fish per acre to 6.0 fish per acre in response to highly variable recruitment. The effects of this increase will be monitored through future sampling and angler creel surveys.

During Fall 2004 gill-net sampling, one yellow bass was collected. This was the first confirmation of this species from Jordan Reservoir. It first appeared in the Coosa River system in Carter's Reservoir in northwest Georgia in 1992 (G. Beisser, GADNR, personal communication) and have since become well established in all Coosa River impoundments above Mitchell Reservoir (Catchings and Smith 2000; R. Andress, ADCNR, personal communication; J. Haffner, ADCNR, personal communication), and

first appeared in Mitchell Reservoir in 2003. The effects of this species will continue to be monitored.

Conclusions

- This reservoir should be sampled again in 3 – 4 years according to reservoir program guidelines.
- Hybrid striped bass stockings should continue at the rate of 6 per acre annually.
- Use of moderate size limits (such as 14-inches) has strong support by bass anglers and would theoretically improve the bass fishery. However, given the current harvest rates, restrictive size limits would have negligible effects on the fishery.
- Continued study is needed to determine the factors responsible for extreme variability in white bass year-class strength.

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Table 1. Jordan reservoir morphometric, physical, and chemical characteristics.

Surface area	6,800	surface acres[a]
Drainage area	10,200	square miles
Full pool elevation	252	feet-msl
Mean annual fluxuation	2 to 4	feet
Shoreline distance	188	miles
Shoreline development index	16.2	
Mean depth	39	feet
Maximum depth	112	feet
Outlet depth	100	feet
Total dissolved solids	89.57	mg/L (ADEM 2004)
Morphoedaphic index	2.31	TDS/mean depth (ft.)
Chlorophyll-a	12.79	µg/L
Growing season	240	frost free days (Jenkins 1967)
Date of Impoundment	1928[a]	

[a]Construction on Jordan Dam was completed in 1928. However, in 1967, Bouldin Dam was completed and created an adjacent basin which connects the two reservoirs by a canal.

Table 2. Fish stocked in Jordan Reservoir, 1980-2005.

Species	Year	No/Acre	Size (in)	Total
FL Largemouth Bass	1980	4.3	1-2	29,000
	1986	2.1	1-2	14,000
	1987	1.0	1-2	6,800
	1988	4.0	1-2	27,200
	1990	2.0	1	13,700
	1991	2.3	1	15,615
	1992	2.0	1-2	13,600
	1993	2.0	1-2	13,600
	1994	2.0	1-2	13,600
Hybrid Striped Bass	1981	9.4	1-2	63,580
	1982	13.1	1-2	89,020
	1983	10.1	1-2	69,002
	1984	10.2	1-2	69,300
	1985	10.1	1-2	69,000
	1986	9.9	1-2	67,200
	1987	5.9	1-2	40,300
	1988	4.9	1-2	33,200
	1989	4.0	1-2	27,200
	1990	4.0	1-2	27,200
	1991	3.9	1-2	26,378
	1992	4.0	1	27,200
	1993	9.9	1-2	67,500
	1994	4.0	1-2	27,200
	1995	4.0	1-2	27,207
	1996	6.4	1-2	43,354
	1997	4.0	1-2	27,200
	1998	4.0	1-2	27,386
	1999	3.9	1-2	26,857
	2000	4.0	1-2	27,185
	2001	6.0	1-2	40,800
	2002	6.0	1-2	40,800
	2003	6.0	1-2	40,800
	2004	6.4	2	43,520
	2005	6.0	1	41,040
Striped Bass	1969	1.0	1-2	6,800
	1973	5.4	1-2	36,466
	1974	5.0	1-2	34,000
	1975	10.1	1-2	69,000
	1976	8.9	1-2	60,450
	1977	9.2	1-2	62,550
	1978	8.8	1-2	60,000
	1979	10.3	1-2	70,070
	1980	5.9	1-2	40,000

Table 3. Number of target species collected by gear-type from Jordan Reservoir, 2004-2005.

	Gear Type								
	Electrofishing				Gill Net			Trap Net		
Species	No.	CPE	Total Effort hours	(secs.)	No.	CPE	Total Effort (net nights)	No.	CPE	Total Effort (net nights)
Black crappie								146	2.4	60
Bluegill	112	147.4	0.76	(2,749)						
Gizzard shad	98	19.6	5.00	(18,000)						
Hybrid striped bass					4	0.4	10			
Largemouth bass	233	46.6	5.00	(18,000)						
Spotted bass	149	29.8	5.00	(18,000)						
Striped bass					8	0.8	10			
Threadfin shad	210	181.0	1.16	(4,190)						
White bass					6	0.6	10			
White crappie								5	0.1	60

Table 4. Non-target species observed during routine sampling activities in Jordan Reservoir, 2004-2005.

NON-TARGET SPECIES OBSERVED	
Blacktail shiner	*Campostoma venusta*
Blue catfish	*Ictalurus furcatus*
Bowfin	*Amia calva*
Channel catfish	*Ictalurus punctatus*
Common carp	*Cyprinus carpio*
Freshwater drum	*Aplodinotus grunniens*
Green sunfish	*Lepomis cyanellus*
Longear sunfish	*Lepomis megalotis*
Longnose gar	*Lepisosteus osseus*
Redear sunfish	*Lepomis microlophus*
River redhorse	*Moxostoma carinatum*
Smallmouth buffalo	*Ictiobus bubalus*
Spotted gar	*Lepisosteus oculatus*
Spotted sucker	*Minytrema melanops*
Warmouth	*Lepomis gulosus*
Yellow bass	*Morone mississippiensis*

Table 5. Relative stock density (RSD), catch per effort (CPE), and relative weight (Wr) of target species in Jordan Reservoir, 1987-2005.

LARGEMOUTH BASS

				SUBSTOCK			RSD-S				RSD-Q				RSD-P				RSD-M				RSD-T				TOTAL	
Year	Gear	No. of Samples	Total Effort	NO.	CPE	PCT.[1]	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE
1987	Electro	7	3.50	13	3.8	14	20	5.8	22	96	26	7.6	28	96	40	11.7	43	99	5	1.5	5	99	1	0.3	1	100	105	30.6
1990	Electro	7	3.50	7	2.0	7	13	3.7	13	98	22	6.3	22	103	60	17.1	59	104	7	2.0	7	102					109	31.1
1992	Electro	9	4.55	27	5.9	20	30	6.5	22	97	70	15.3	51	98	34	7.4	25	97	2	0.4	1	91					163	35.8
1995	Electro	6	3.00	2	0.6	2	14	4.6	13	94	58	19.3	53	99	32	10.6	29	99	5	1.6	5	95					111	37.0
1999	Electro	5	2.30	8	3.5	8	40	17.6	38	92	27	11.8	25	95	36	15.8	34	98	3	1.3	3	100					114	50.2
2002	Electro	5	2.50	6	2.4	6	23	9.2	23	91	29	11.6	28	95	38	15.2	37	95	12	4.8	12	93					108	43.2
2005	Electro	10	5.00	28	5.6	14	42	8.4	20	92	62	12.4	30	97	92	18.4	45	95	9	1.8	4	92					233	46.6
	LAKE AVERAGE				3.4	10		8.0	22	94		12.0	34	98		13.7	39	98		1.9	5	96		0.0	0	100		39.2

SPOTTED BASS

				SUBSTOCK			RSD-S				RSD-Q				RSD-P				RSD-M				RSD-T				TOTAL	
Year	Gear	No. of Samples	Total Effort	NO.	CPE	PCT.[1]	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE
1987	Electro	6	2.67	17	6.5	15	52	20.0	47	101	20	7.7	18	104	34	13.1	31	105	5	1.9	5	97					128	49.2
1990	Electro	8	3.80	9	2.4	9	21	5.5	20	104	33	8.7	32	111	34	8.9	33	109	14	3.7	14	106	1	0.3	1	104	112	29.5
1992	Electro	9	4.50	25	5.5	10	103	22.8	42	107	66	14.6	27	108	57	12.6	23	106	18	4.0	7	108	1	0.2	0	111	270	60.0
1995	Electro	6	3.00	3	1.0	3	20	6.6	20	99	43	14.3	43	100	26	8.6	26	100	7	2.3	7	105	3	1.0	3	100	102	34.0
1999	Electro	6	3.00	12	4.0	11	22	7.3	20	98	24	8.0	22	101	38	12.6	35	104	25	8.3	23	103					121	40.3
2002	Electro	5	2.50	5	2.0	5	21	8.4	19	102	35	14.0	32	102	40	16.0	36	107	14	5.6	13	105					115	46.0
2005	Electro	10	5.00	17	3.4	13	17	3.4	13	97	13	2.6	10	101	57	11.4	43	108	43	8.6	33	109	2	0.4	2	102	149	29.8
	LAKE AVERAGE				3.5	9		10.6	26	101		10.0	26	104		11.9	32	106		4.9	15	105		0.3	1	104		41.3

BLUEGILL SUNFISH

				SUBSTOCK			RSD-S				RSD-Q				RSD-P				RSD-M				RSD-T				TOTAL	
Year	Gear	No. of Samples	Total Effort	NO.	CPE	PCT.[1]	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE
1990	Electro	5	0.70				92	131.4	88		11	15.7	11		1	1.4	1										104	148.5
1992	Electro	3	0.33				98	295.2	98	86	2	6.0	2	91													100	301.2
1995	Electro	3	0.36				96	271.0	96	78	4	11.2	4	84													100	282.2
1999	Electro	3	0.50				99	206.7	94	82	6	12.5	6	88													105	219.2
2002	Electro	3	0.70				89	120.9	83	81	18	24.4	17	89													107	145.4
2005	Electro	3	0.76				107	140.1	96	78	5	6.5	4	80													112	146.7
	LAKE AVERAGE							194.2	93	81		12.7	7	86		0.2	0	0										207.2

GIZZARD SHAD

				SUBSTOCK			RSD-S				RSD-Q				RSD-P				RSD-M				RSD-T				TOTAL	
Year	Gear	No. of Samples	Total Effort	NO.	CPE	PCT.[1]	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE
1990	Electro	4	1.91				65	34.0	68		30	15.7	32														95	49.7
1992	Electro	6	2.40	13	5.4	13	64	26.6	62	95	39	16.2	38	95													116	48.2
1995	Electro	5	2.10	82	39.8	82	78	37.9	78	83	22	10.7	22	85													182	88.3
1999	Electro	8	4.00				58	14.5	59	90	40	10.0	41	89													98	24.5
2002	Electro	8	4.00	3	0.8	9	12	3.0	35	87	22	5.5	65	84													37	9.3
2005	Electro	10	5.00	12	2.4	14	42	8.4	49	83	43	8.6	51	87													97	19.4
	LAKE AVERAGE				8.1	20		20.7	59	88		11.1	42	88														39.9

THREADFIN SHAD

				SUBSTOCK			RSD-S				RSD-Q				RSD-P				RSD-M				RSD-T				TOTAL	
Year	Gear	No. of Samples	Total Effort	NO.	CPE	PCT.[1]	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE
1990	Electro	5	0.40				69	243.0	70		34	119.7	30														103	362.7
1992	Electro	8	3.59				90	25.1	87		14	3.9	13														104	29.0
1995	Electro	6	2.60				86	33.1	86		14	5.4	14														100	38.5
1999	Electro	3	0.80				115	144.8	82		26	32.8	18														141	177.6
2002	Electro	4	1.20				100	81.8	95		5	4.1	5														105	85.9
2005	Electro	4	1.16				209	180.2	100		0	0.0	0														209	180.2
	LAKE AVERAGE							118.0	87			27.7	13															145.7

BLACK CRAPPIE

				SUBSTOCK			RSD-S				RSD-Q				RSD-P				RSD-M				RSD-T				TOTAL	
Year	Gear	No. of Samples	Total Effort	NO.	CPE	PCT.[1]	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE	PCT	Wr	NO.	CPE
1990	Trap-Net	20	20.00								3	0.2	20		7	0.4	45		2	0.1	13						12	0.6
1992	Trap-Net	80	80.00								32	0.4	34	93	44	0.6	47	100	15	0.2	16	104	2	0.0	2	83	93	1.2
1994	Trap-Net	50	50.00	9	0.2	7	14	0.3	10		57	1.1	42	89	47	0.9	35	93	18	0.4	13	95					145	2.9
1998	Trap-Net	40	40.00	6	0.2	4	24	0.6	16	79	87	2.2	58	89	17	0.4	11	92	21	0.5	14	98					155	3.9
2001	Trap-Net	43	43.00	2	0.1	2	2	0.1	2	80	24	0.6	19	92	61	1.4	49	93	38	0.9	30	94					127	3.0
2004	Trap-Net	60	60.00	0	0.0	0	11	0.2	8	75	43	0.7	30	89	63	1.1	43	90	28	0.5	19	91					145	2.4
	LAKE AVERAGE				0.1	2		0.2	6	78		0.9	34	90		0.8	38	94		0.4	18	96		0.0	0	83		2.3

[1] SUBSTOCK PCT. is a ratio of the number of substock size fish to 100 of stock size and larger.

Table 6. Age composition* and mean length of largemouth bass from Jordan Reservoir, Spring 2005.

Annulus	Year Class	Number	Percent	CPE	Mean Length	Standard Error
1	2004	37	15.9	7.4	149.9	7.9
2	2003	64	27.5	12.8	295.1	4.9
3	2002	55	23.6	11.0	380.3	4.4
4	2001	29	12.4	5.8	434.4	6.1
5	2000	24	10.3	4.8	462.9	6.3
6	1999	12	5.2	2.4	454.3	11.7
7	1998	5	2.1	1.0	501.0	15.1
8	1997	5	2.1	1.0	520.0	11.5
9	1996	0	0.0	0.0	0.0	
10	1995	1	0.4	0.2	473.0	
11	1994	1	0.4	0.2	425.0	
Total		233	100.0	46.6		

*These data include aged and un-aged fish. Ages were assigned to un-aged fish based upon an age-length key developed from a sub-sample.

Table 7. Age composition* and mean length of spotted bass from Jordan Reservoir, Spring 2005.

Annulus	Year Class	Number	Percent	CPE	Mean Length	Standard Error
1	2004	18	12.1	3.6	136.4	7.2
2	2003	29	19.5	5.8	282.1	6.9
3	2002	35	23.5	7.0	377.3	3.3
4	2001	41	27.5	8.2	427.3	3.7
5	2000	17	11.4	3.4	463.9	3.8
6	1999	3	2.0	0.6	473.7	5.7
7	1998	5	3.4	1.0	493.2	10.8
8	1997	1	0.7	0.2	516.0	
Total		149	100.0	29.8		

* These data include aged and un-aged fish. Ages were assigned to un-aged fish based upon an age-length key developed from a sub-sample.

Table 8. Age composition and mean length of black crappie from Jordan Reservoir, Fall 2004.

Annulus	Year Class	Number	Percent	CPE	Mean Length	Standard Error
0	2004	0	0.0	0.0		
1	2003	18	12.4	0.3	220.2	5.1
2	2002	32	22.1	0.5	246.9	7.4
3	2001	88	60.7	1.5	272.8	3.5
4	2000	0	0.0	0.0	0.0	
5	1999	0	0.0	0.0	0.0	
6	1998	0	0.0	0.0	0.0	
7	1997	5	3.4	0.1	356.0	6.0
8	1996	2	1.4	0.0	305.0	51.0
Total		145	100.0	2.4		

Table 9. Age composition and mean length of hybrid striped bass from Jordan Reservoir, Fall 2004.

Annulus	Year Class	Number	Percent	CPE	Mean Length	Standard Error
0	2004	0	0.0	0.0		
1	2003	4	100.0	0.4	488.5	11.3
Total		4	100.0	0.4		

Table 10. Age composition and mean length of striped bass from Jordan Reservoir, Fall 2004.

Annulus	Year Class	Number	Percent	CPE	Mean Length	Standard Error
0	2004	1	12.5	0.1	247.0	
1	2003	7	87.5	0.7	517.3	14.7
Total		8	100.0	0.8		

Table 11. Age composition and mean length of white bass from Jordan Reservoir, Fall 2004.

Annulus	Year Class	Number	Percent	CPE	Mean Length	Standard Error
0	2004	4	66.7	0.4	295.8	20.5
1	2003	2	33.3	0.2	345.5	5.5
Total		6	100.0	0.6		

Table 12. Historical largemouth bass (LMB) and spotted bass (SPB) year-class abundance, growth (*denotes standard errors in excess of 10), and CPE for Jordan Reservoir, collected by spring electrofishing, 1983 - 2005.

	Sample Year																																	
	2005			2002			1999			1995			1992			1990			1987			1984			1983		
Year Class	No. (xTL)			No. (xTL)			No. (xTL)			No. (xTL)			No. (xTL)			No. (xTL)			No. (xTL)			No. (xTL)			No. (xTL)		
	Age	LMB	SPB	Age	LMB	SPB	Age	LMB	SPB	Age	LMB	SPB	Age	LMB	SPB	Age	LMB	SPB	Age	LMB	SPB	Age	LMB	SPB	Age	LMB	SPB
2004	1	37 (150)	18 (136)																															
2003	2	64 (294)	29 (282)																															
2002	3	55 (380)	35 (377)																															
2001	4	29 (434)	41 (427)	1	16 (199*)	7 (148*)																												
2000	5	24 (463)	17 (464)	2	34 (312)	60 (304)																												
1999	6	12 (454*)	3 (474)	3	10 (366)	20 (378)																												
1998	7	5 (501*)	5 (493*)	4	18 (414)	18 (421)	1	30 (214)	21 (154)																									
1997	8	5 (520*)	1 (516)	5	12 (432*)	5 (464*)	2	32 (292)	32 (284)																									
1996	9	0	0	6	4 (452*)	4 (477)	3	25 (367)	32 (365)																									
1995	10	1 (473)	1 (466)	7	3 (529*)	1 (462)	4	5 (419)	12 (420)																									
1994	11	1 (425)		8	3 (535*)		5	11 (452)	18 (443)	1	3 (176*)	3 (92)																						
1993				9	5 (525)		6	7 (468)	3 (480)	2	53 (316)	51 (283)																						
1992				10	3 (537)		7	2 (504)	2 (483)	3	17 (352)	25 (349)																						
1991							8	1 (531)	1 (475)	4	18 (406)	15 (404)	1	31 (169)	25 (131)																			
1990							9	1 (515)		5	13 (447*)	4 (469*)	2	75 (302)	161 (267)																			
1989										6	4 (490*)	1 (460)	3	30 (372)	46 (368)	1	14 (208)	9 (110)															
1988										7	1 (506)	1 (521)	4	13 (396)	17 (402)	2	11 (302*)	27 (249)															
1987										8	2 (543)	1 (529)	5	9 (456)	15 (450)	3	44 (381)	51 (350)															
1986										9		1 (540)	6	4 (480*)	3 (468)	4	21 (432)	10 (421)	1	16 (168)	15 (110)											
1985													7	1 (520)	1 (448)	5	6 (469*)	9 (438)	2	33 (296)	23 (192)											
1984													8		0	6	8 (494*)	3 (464)	3	23 (373)	35 (250)											
1983													9		2 (515)	7	2 (500*)	2 (483)	4	18 (409)	19 (299)	1	45 (198)	17 (165)							
1982																8	0	0	5	7 (442)	23 (349)	2	59 (303)	4 (286)	1	24 (191)	3 (118)				
1981																9	1 (515)	0	6	4 (510)	14 (388)	3	18 (359)	9 (303)	2	25 (272)	14 (188)				
1980																10	2 (577*)	0	7	3 (493)	9 (442)	4	15 (395)	14 (363)	3	28 (340)	11 (267)				
1979																11		1 (547)	8	1 (510)		5	5 (458)	2 (425)	4	14 (383)	6 (319)				
1978																			9	1 (525)		6	6 (515)		5	6 (438)	3 (375)				
1977																			10	1 (630)		7	3 (568)		6	3 (501)					
CPE		46.6	29.8		43.2	46.0		50.2	40.3		37.0	34.0		35.8	60.0		31.5	29.5		30.6	51.7		80.5	73.6		38.1	14.1				

Table 13. Length-at-age for largemouth bass and spotted bass collected from Jordan Reservoir, 1983-2005.

	Largemouth Bass								
	1983	1984	1987	1990	1992	1995	1999	2002	2005
Age-1	191	198	168	208	169	176	214	199	150
Age-2	272	303	296	302	302	316	292	312	295
Age-3	340	359	373	381	372	352	367	366	380
Age-4	383	395	409	432	396	406	419	414	434
Age-5	438	458	442	469	456	447	452	432	463
	Spotted Bass								
	1983	1984	1987	1990	1992	1995	1999	2002	2005
Age-1	118	*	110	110	131	95	154	148	136
Age-2	188	165	192	249	267	283	284	304	282
Age-3	267	286	250	350	368	349	365	378	377
Age-4	319	303	299	421	402	404	420	421	427
Age-5	375	363	349	438	450	469	443	464	464

Table 14. Black crappie (BCP) and white bass (WEB) year-class abundance in Jordan Reservoir during the five most recent sampling years.

	Sample Year									
	2004		2001		1998		1994		1992	
Year Class	BCP	WEB	BCP	WEB	BCP	WEB	BCP	WEB	BCP	WEB
2004	0	4								
2003	18	2								
2002	32									
2001	88		2	49						
2000	0		27	4						
1999	0		13	25						
1998	0		1	1	0	1				
1997	5		5	0	33	2				
1996	2		79	10	121	41				
1995					0	0	0	0		
1994					1	1	23	2		
1993						1	119	53		
1992							1	0	0	11
1991							0	0	1	1
1990							2	1	88	5
1989									0	
1988									1	
1987									1	
1986									0	
1985									0	
1984									2	
CPUE	2.4	0.6	3.0	4.5	3.9	2.3	2.9	3.5	1.2	0.8

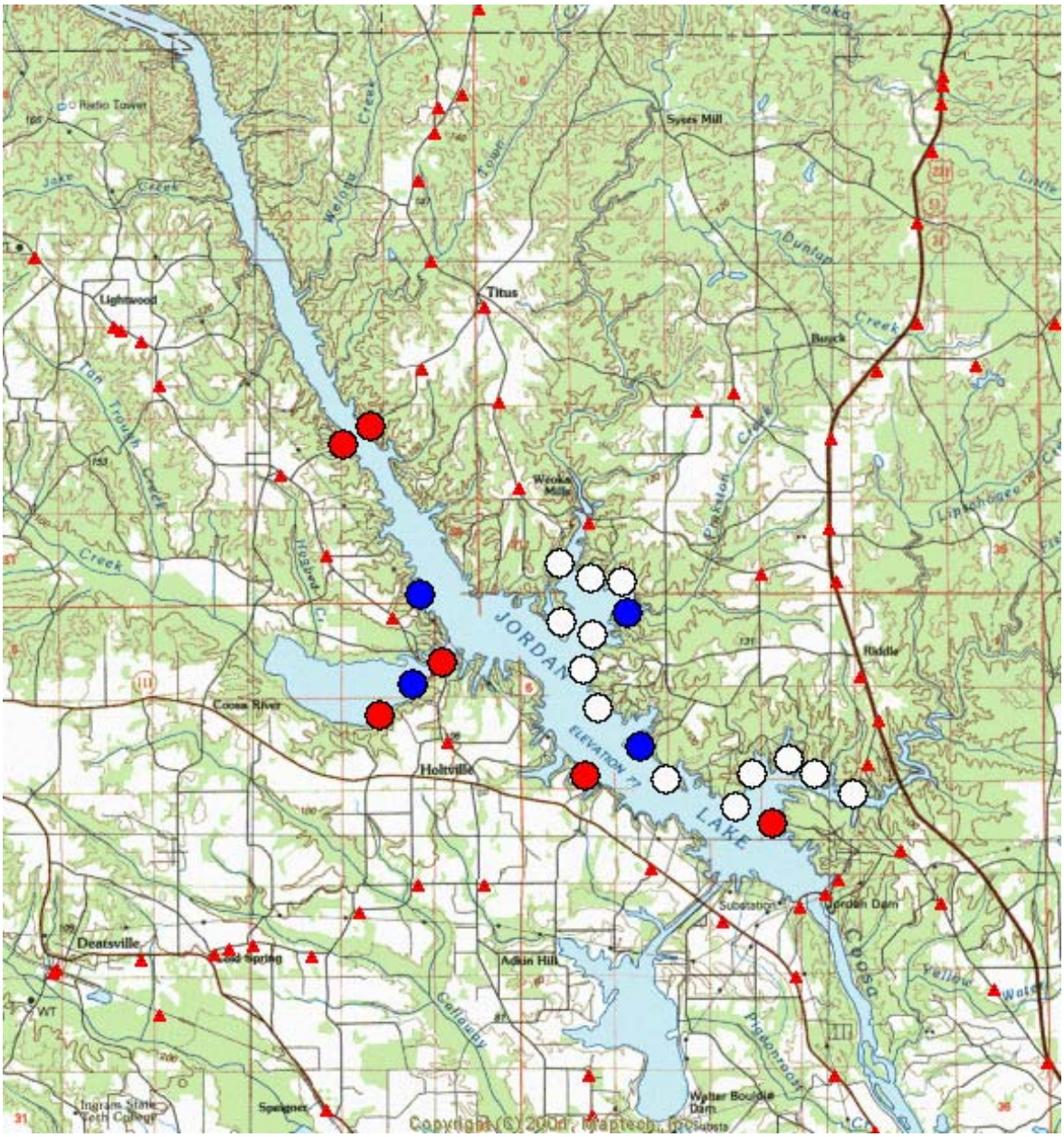

Figure 1. Map of Jordan Reservoir with locations of all public (red) and private (blue) boat ramps and the Fall 2004 trap-netting sites (white).

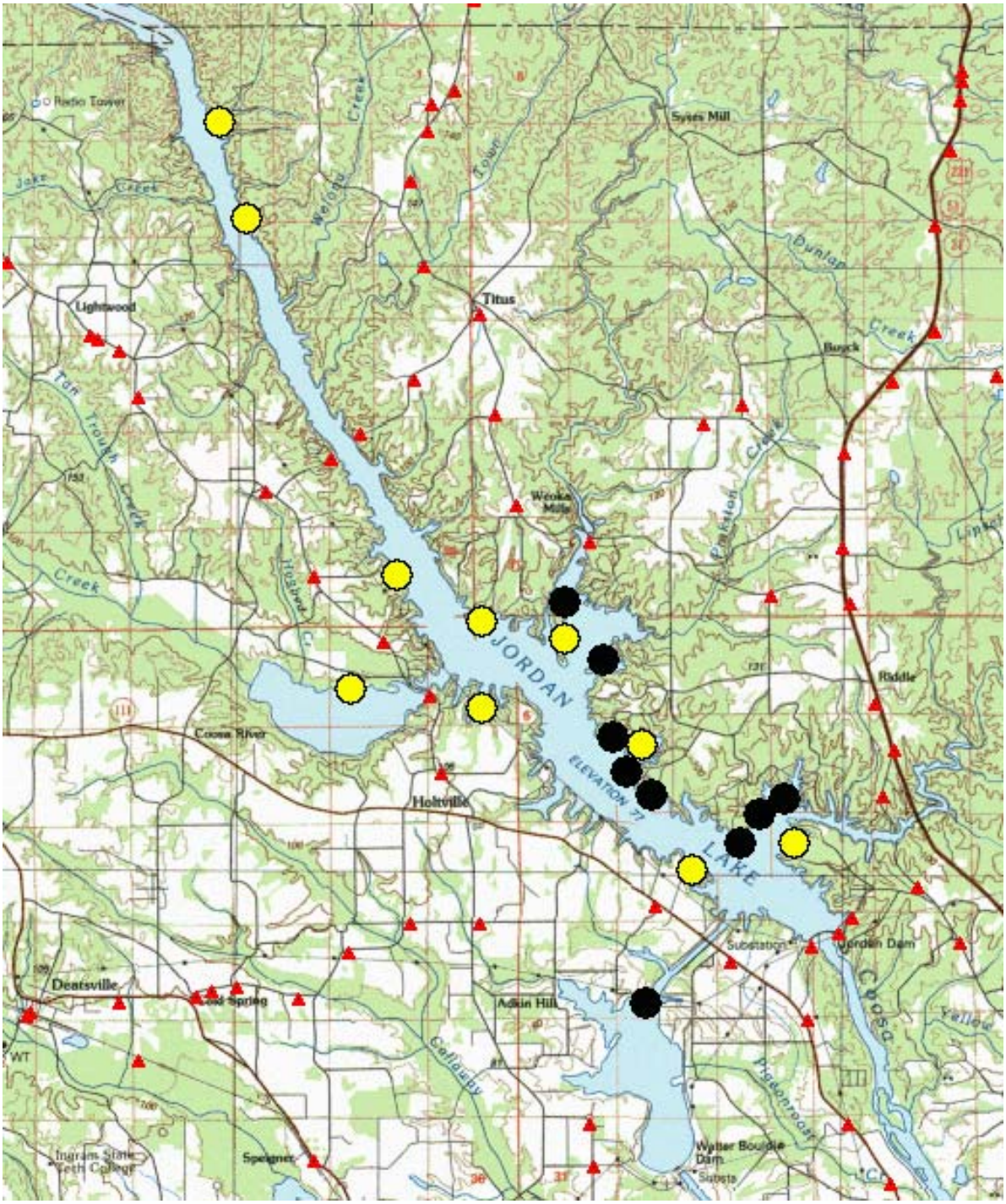

Figure 2. Map of Jordan Reservoir with locations of Fall 2004 gill-netting sites (black) and Spring 2005 electrofishing sites (yellow).

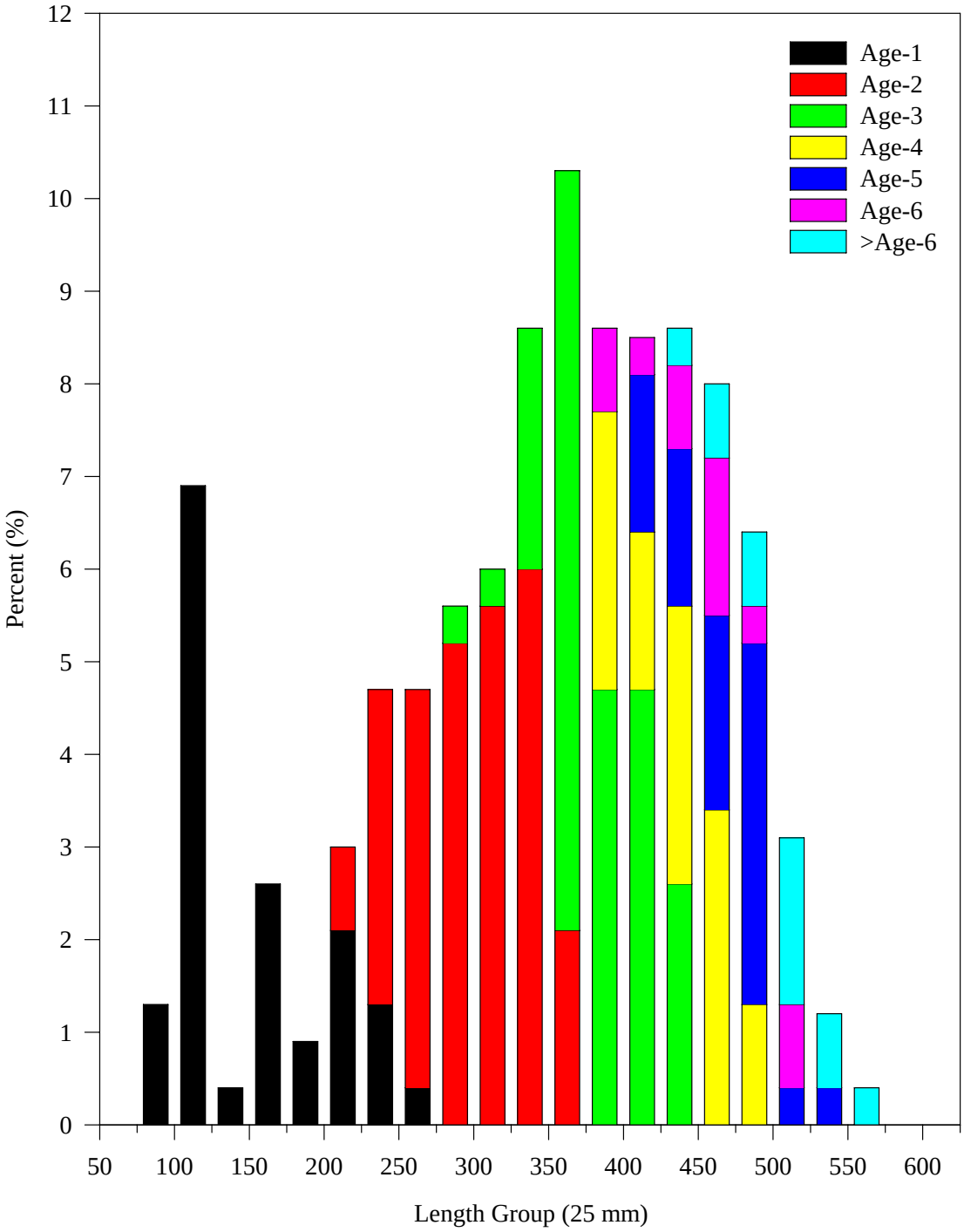

Figure 3. Length-at-age frequency of largemouth bass (N=233) taken from Jordan Reservoir, Spring 2005.

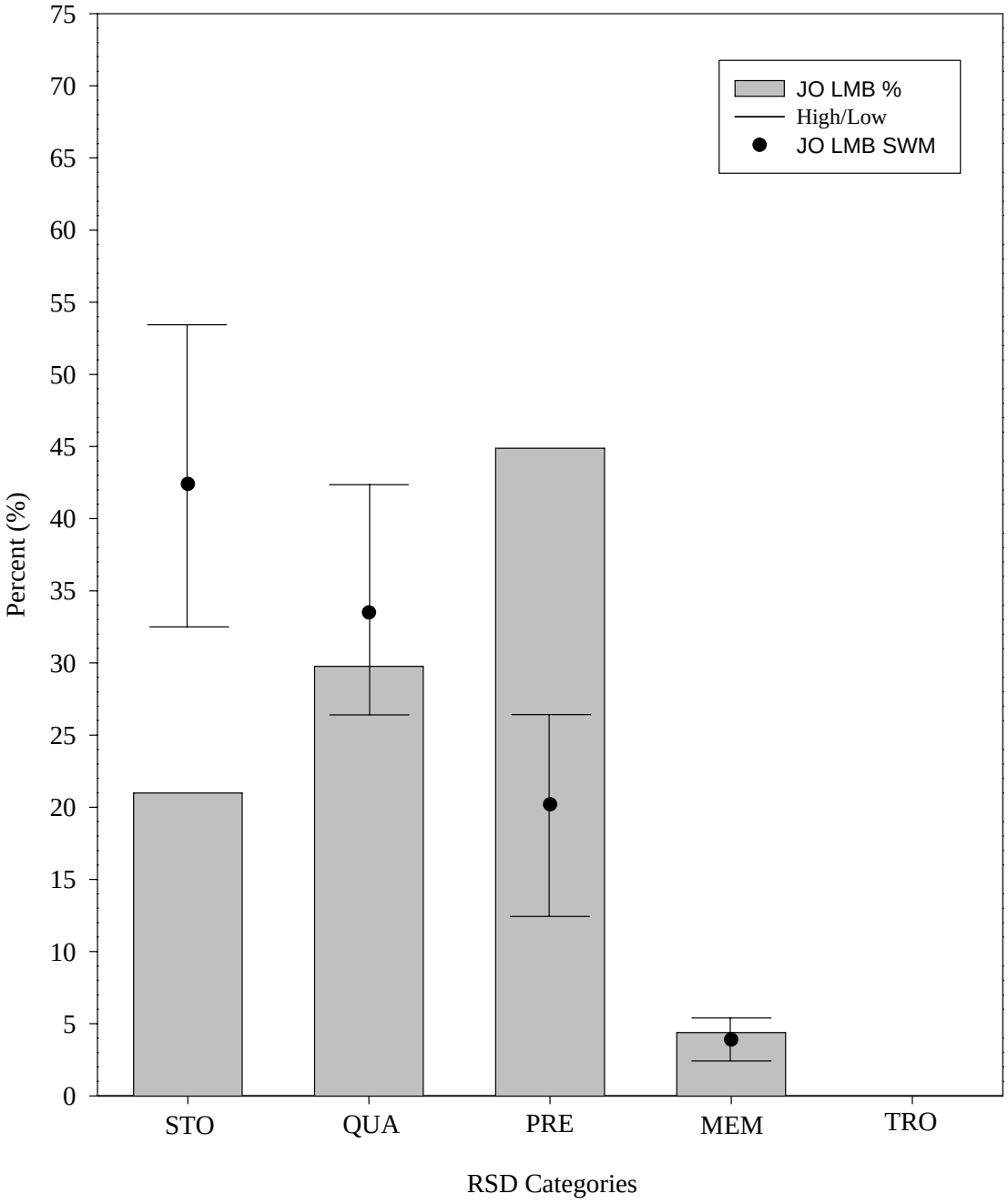

Figure 4. The relative stock densities (RSD) of largemouth bass in Jordan Reservoir, Spring 2005, and the statewide mean. The I-beams denote the 25th and 75th percentiles of RSD values of spotted bass, statewide.

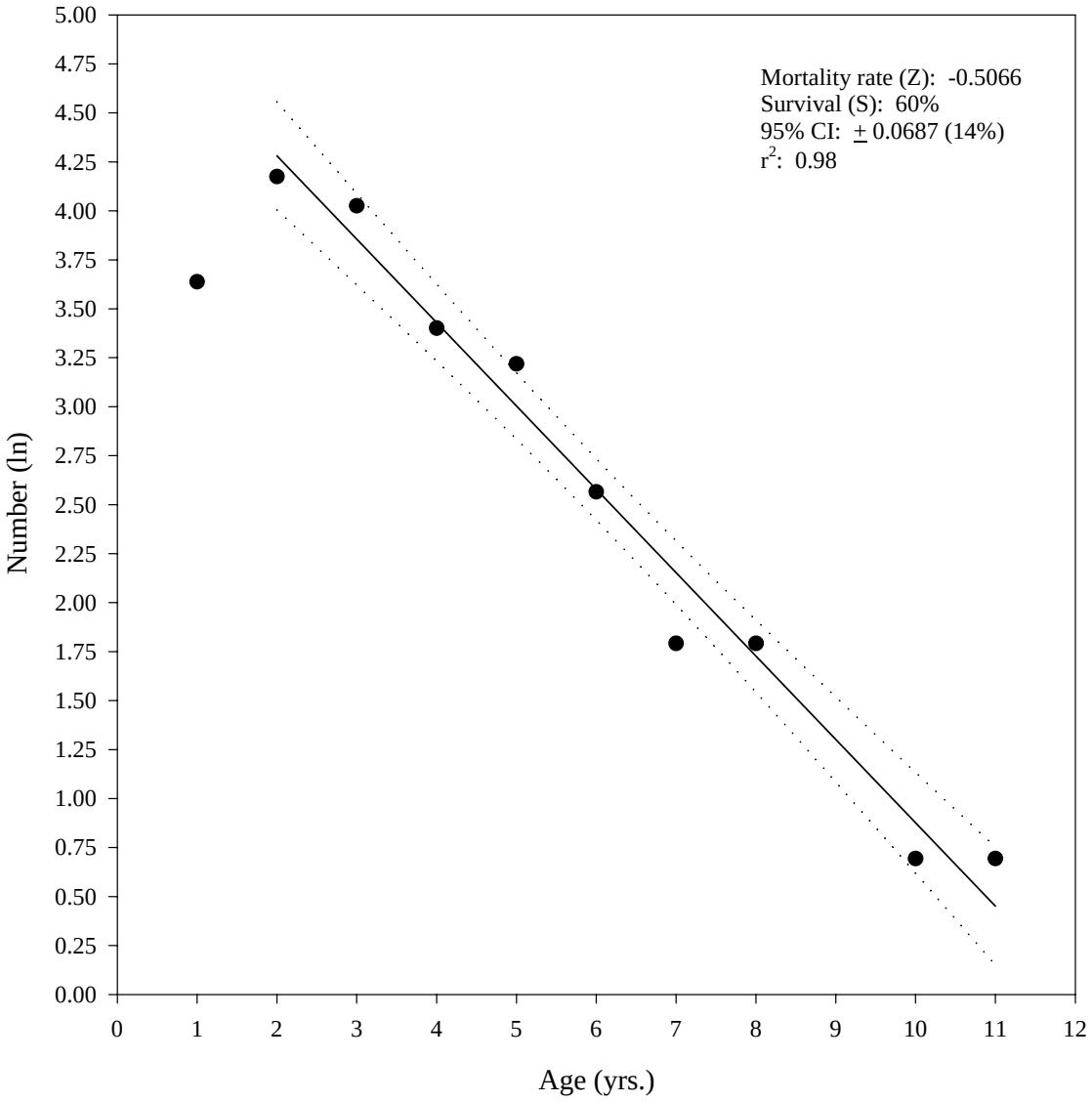

Figure 5. Catch curve and estimated total annual mortality rate for largemouth bass age-2 through age-11, collected by electrofishing from Jordan Reservoir during Spring, 2005.

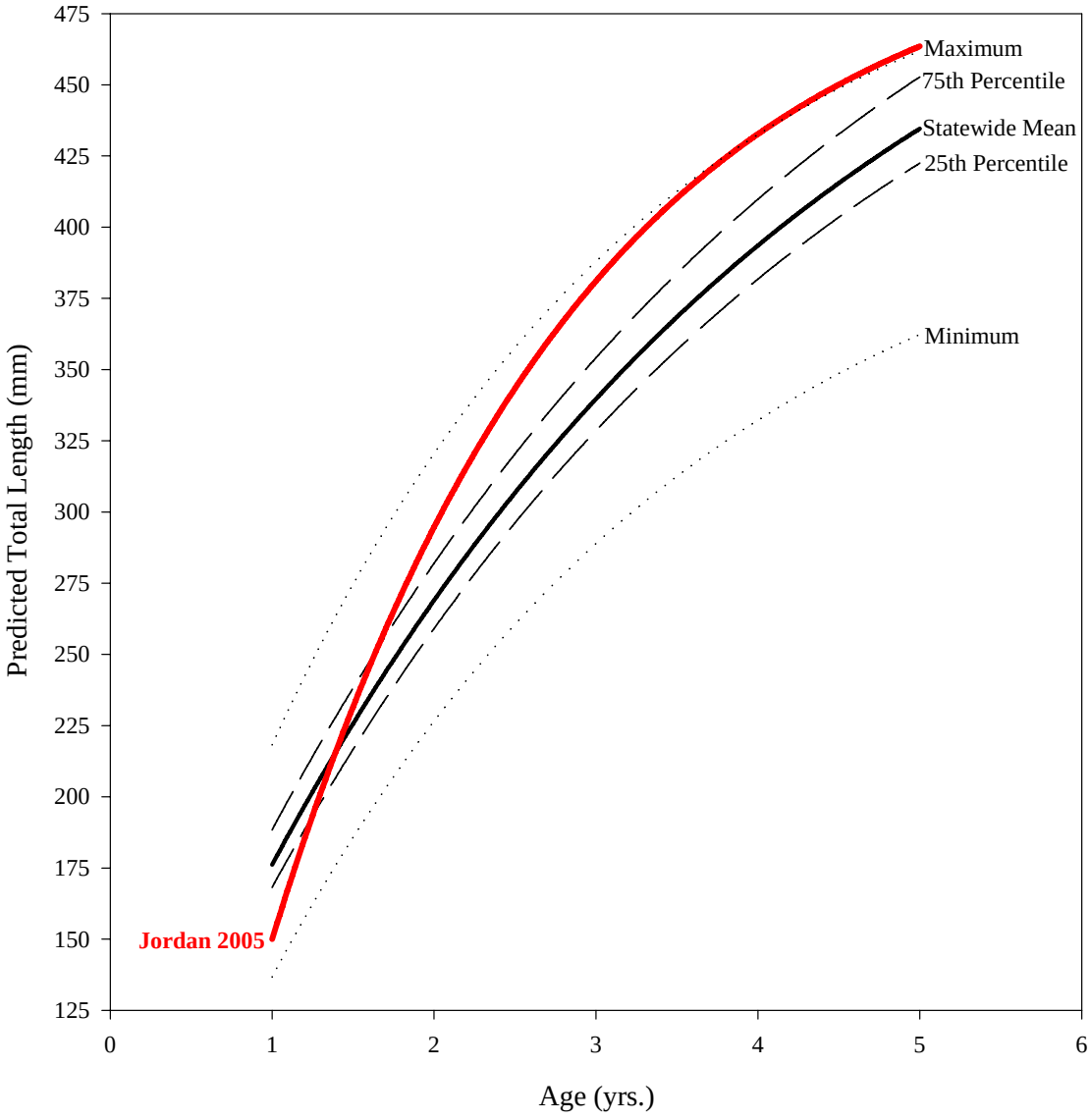

Figure 6. Total lengths-at-age for largemouth bass collected from Jordan Reservoir during Spring 2005 and the Alabama statewide maximum, 75th percentile, mean, 25th percentile, and minimum for largemouth bass.

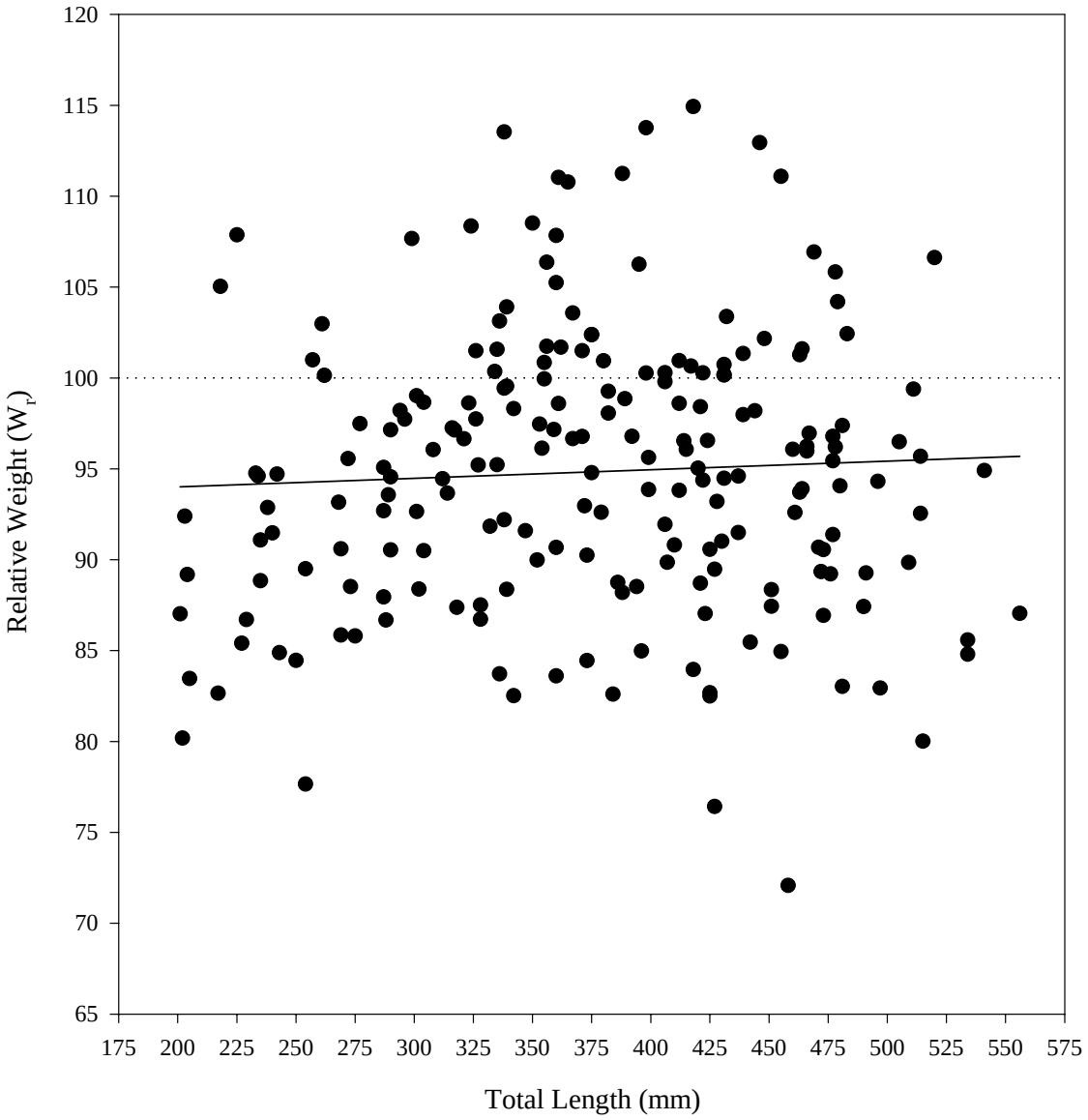

Figure 7. Relative weight of stock-size largemouth bass (N=205) collected from Jordan Reservoir, Spring 2005.

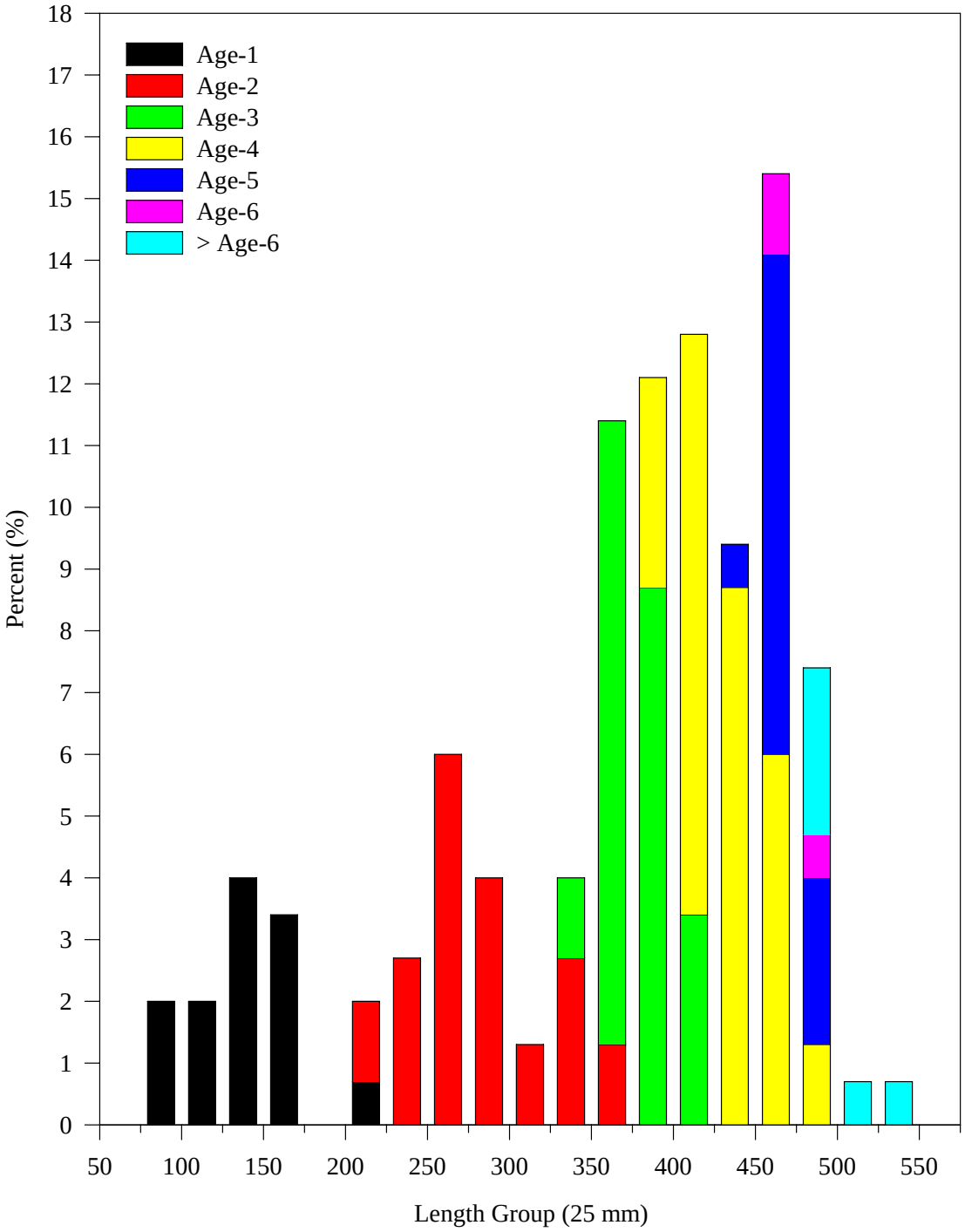

Figure 8. Length-at-age frequency of spotted bass (N=149) taken from Jordan Reservoir, Spring 2005.

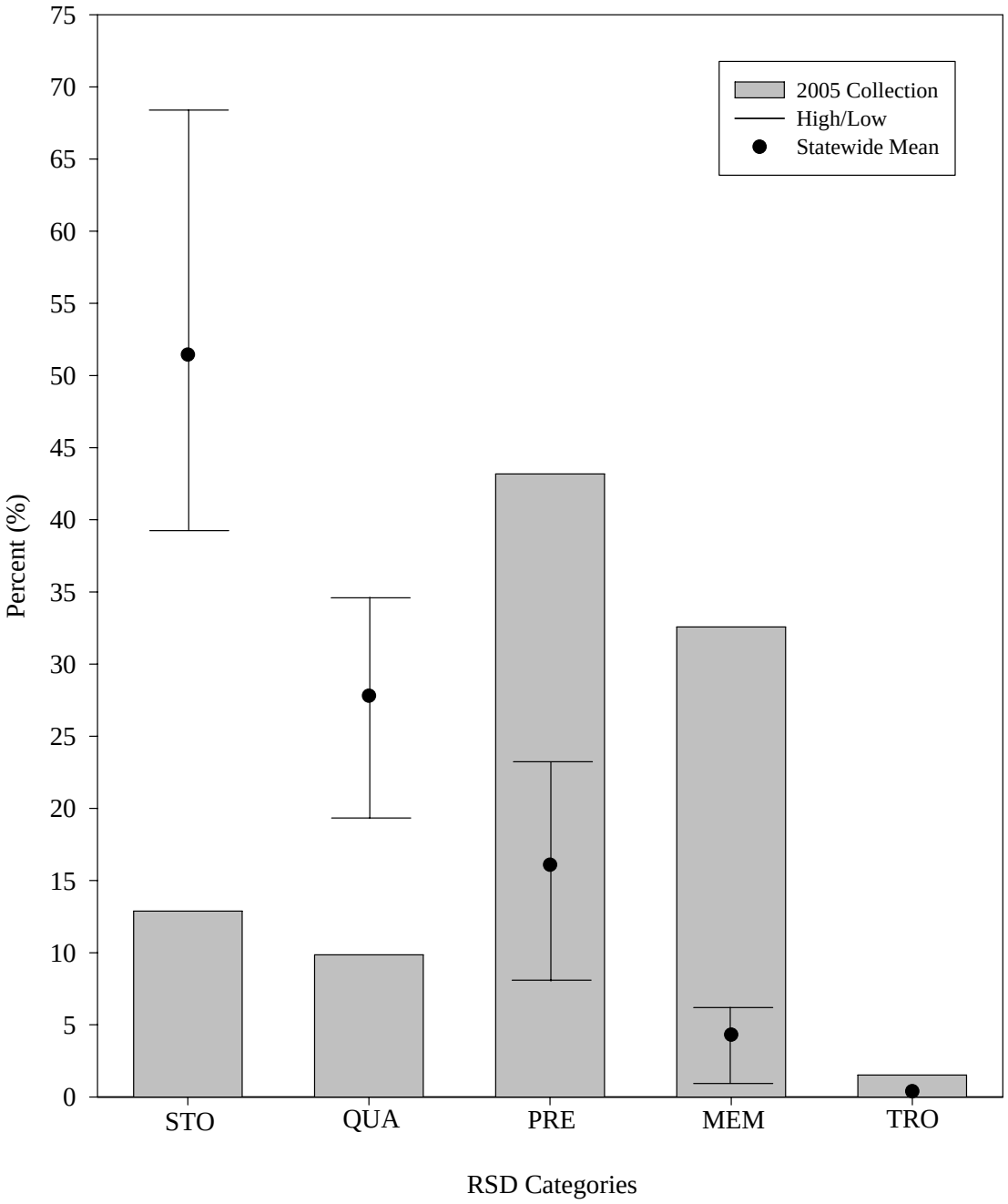

Figure 9. The relative stock densities (RSD) of spotted bass in Jordan Reservoir, Spring 2005, and the statewide mean. The I-beams denote the 25th and 75th percentiles of RSD values of spotted bass, statewide.

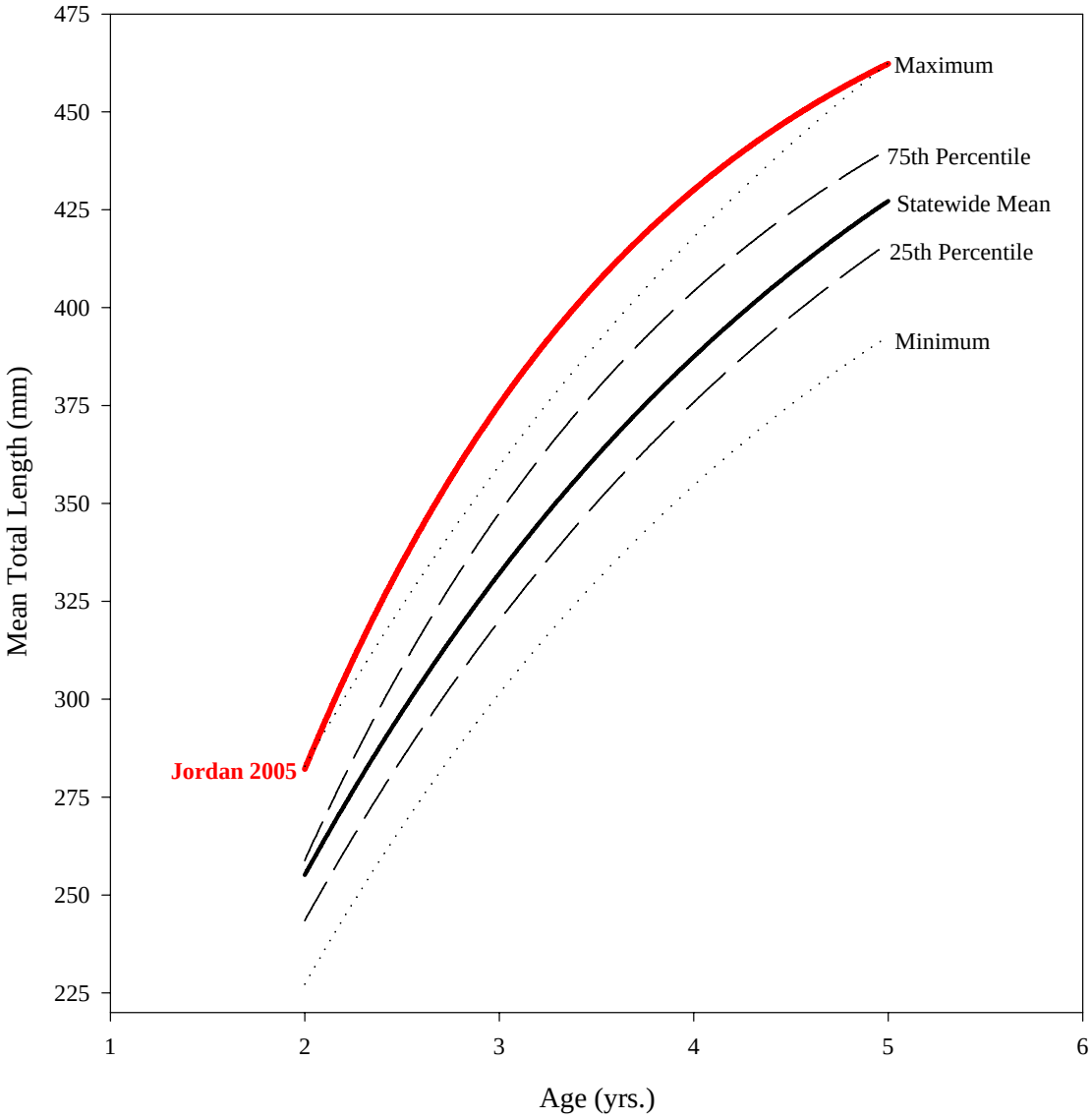

Figure 10. Total lengths-at-age for spotted bass collected from Jordan Reservoir during Spring 2005 and the Alabama statewide maximum, 75th percentile, mean, 25th percentile, and minimum for spotted bass.

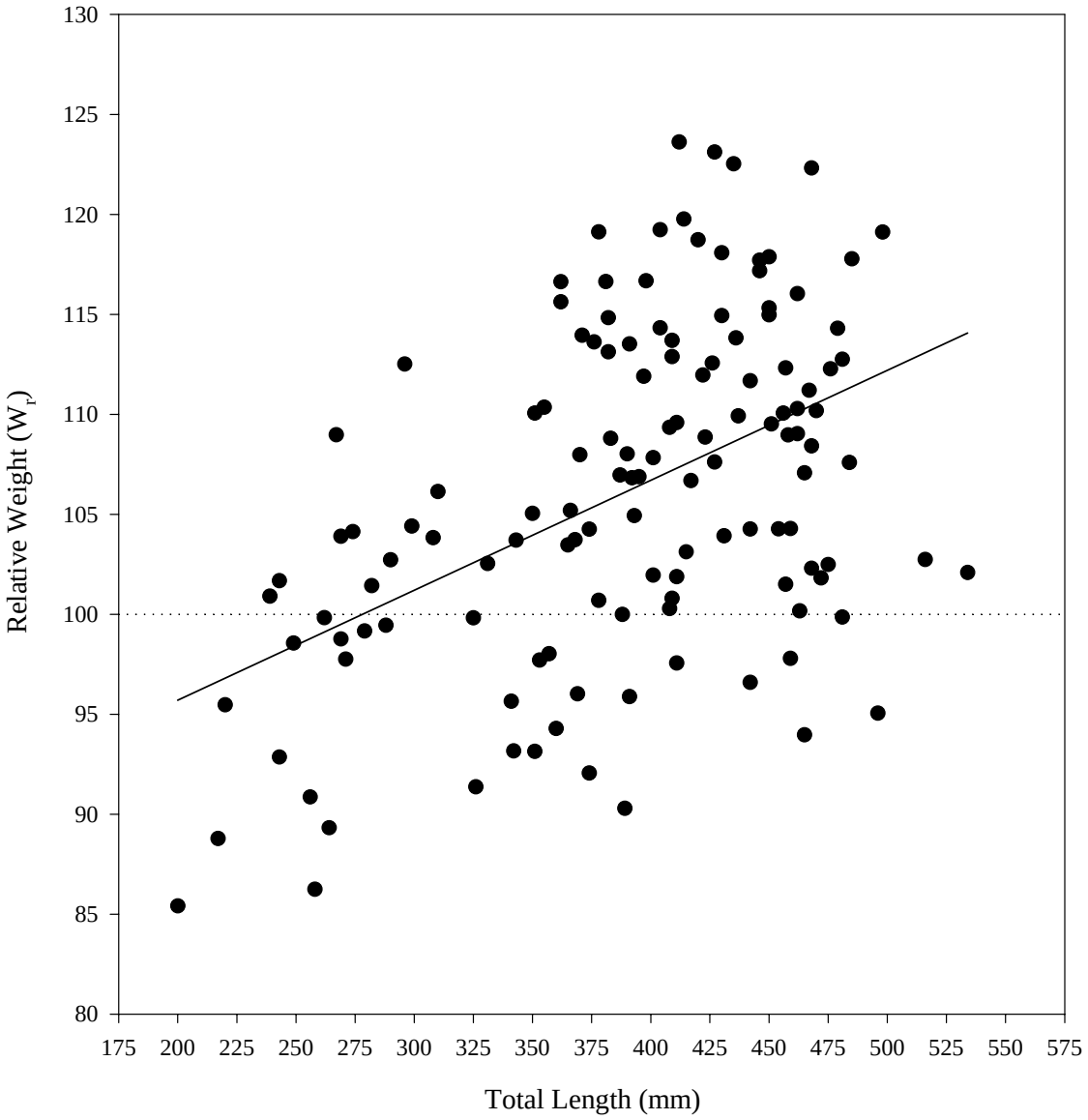

Figure 11. Relative weight of stock-size spotted bass (N=132) from Jordan Reservoir, Spring 2005.

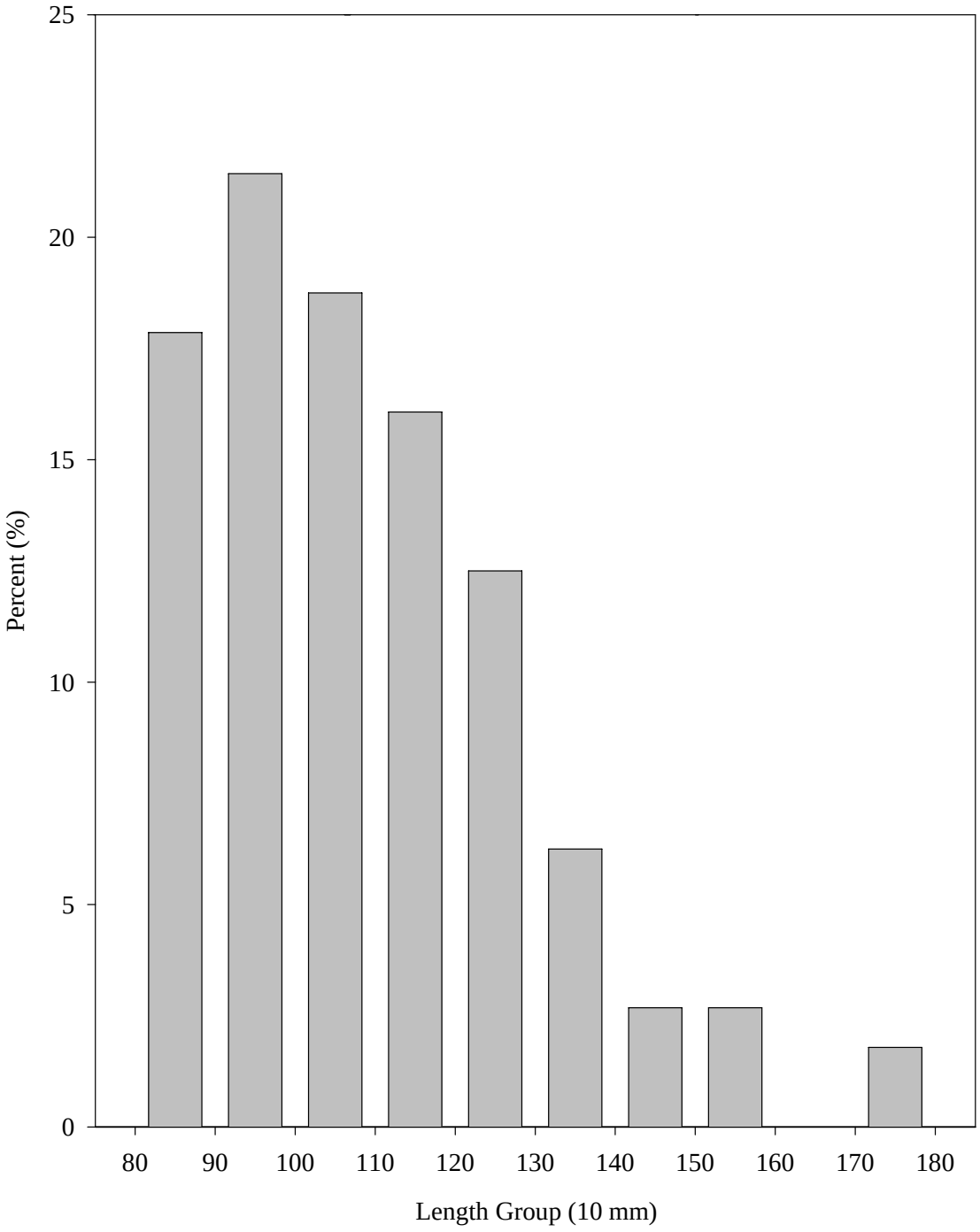

Figure 12. Length frequency histogram for bluegill (N=112) collected by electrofishing from Jordan Reservoir, Spring 2005.

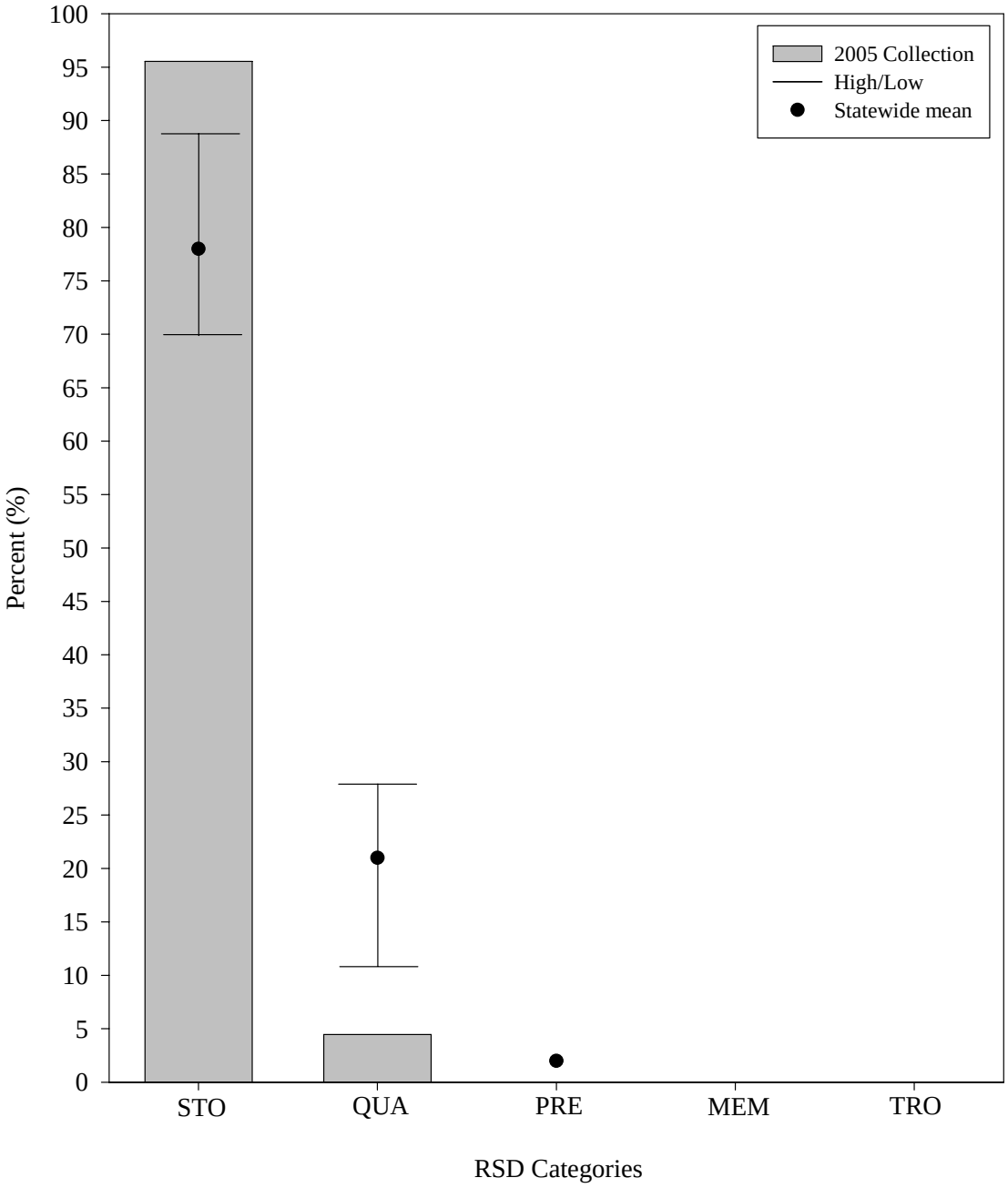

Figure 13. The relative stock densities (RSD) of bluegill in Jordan Reservoir, Spring 2005, and the statewide mean. The I-beams denote the 25th and 75th percentiles of RSD values of largemouth bass, statewide.

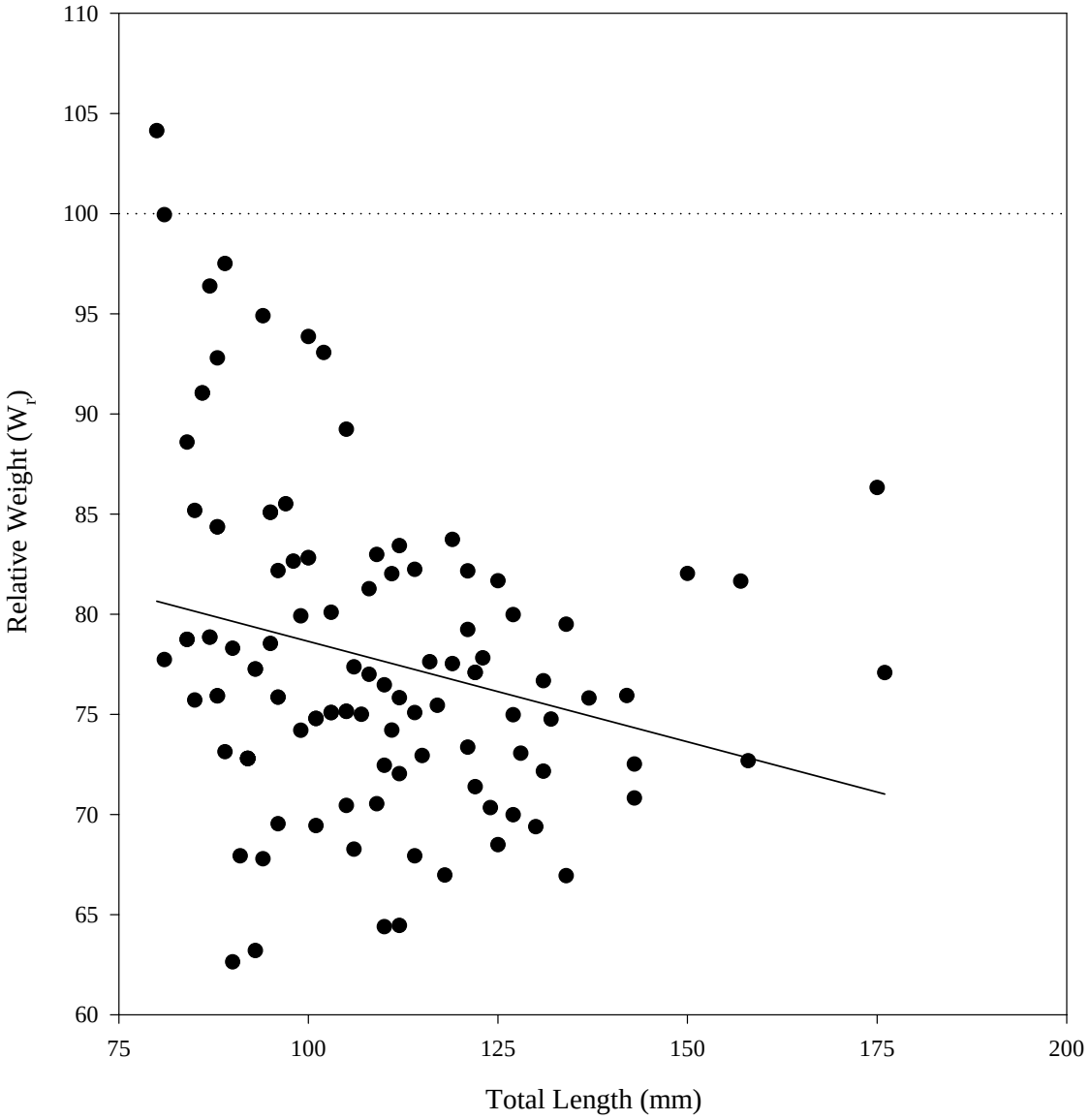

Figure 14. Relative weight of stock-size bluegill (N=112) collected from Jordan Reservoir, Spring 2005.

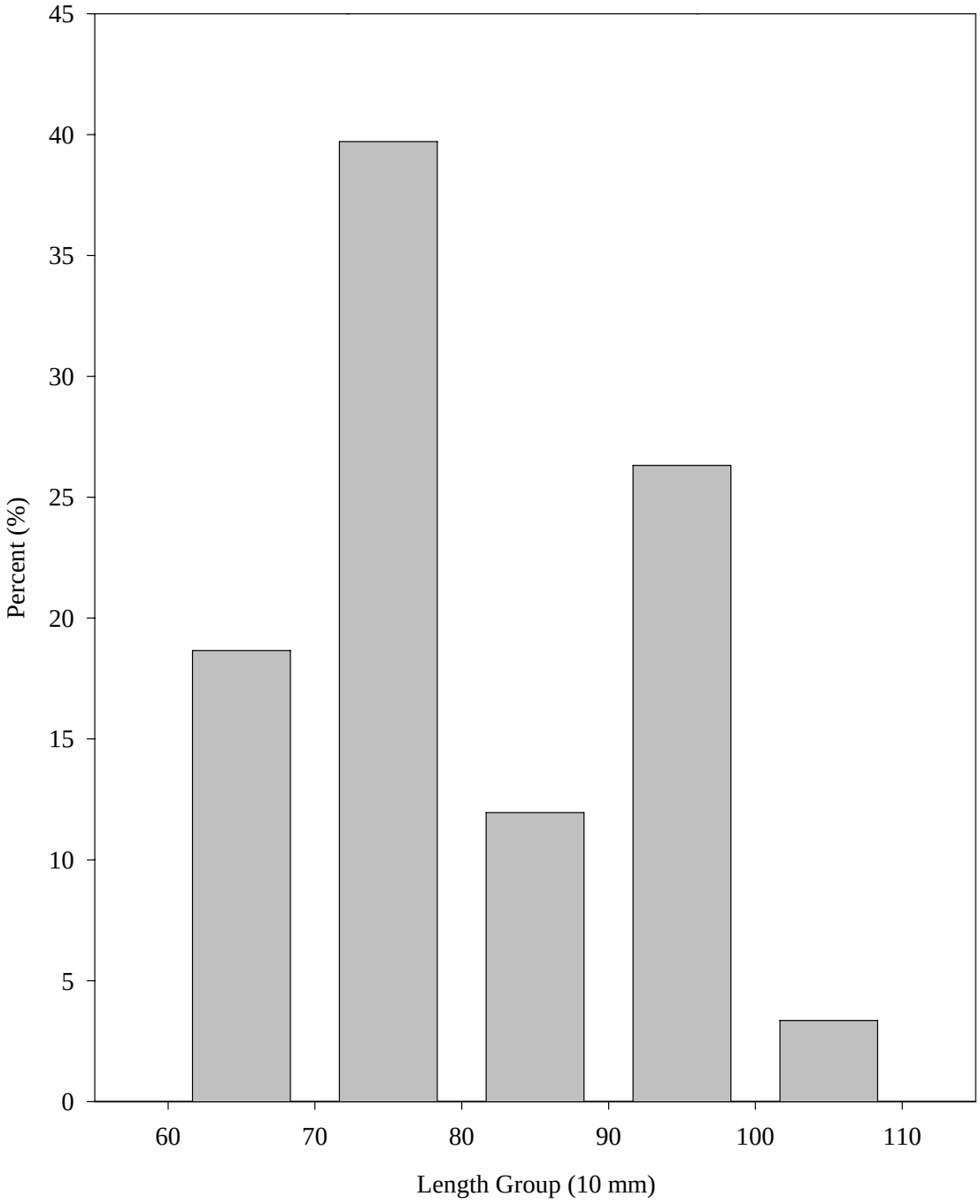

Figure 15. Length frequency histogram for threadfin shad collected by electrofishing from Jordan Reservoir, Spring 2005.

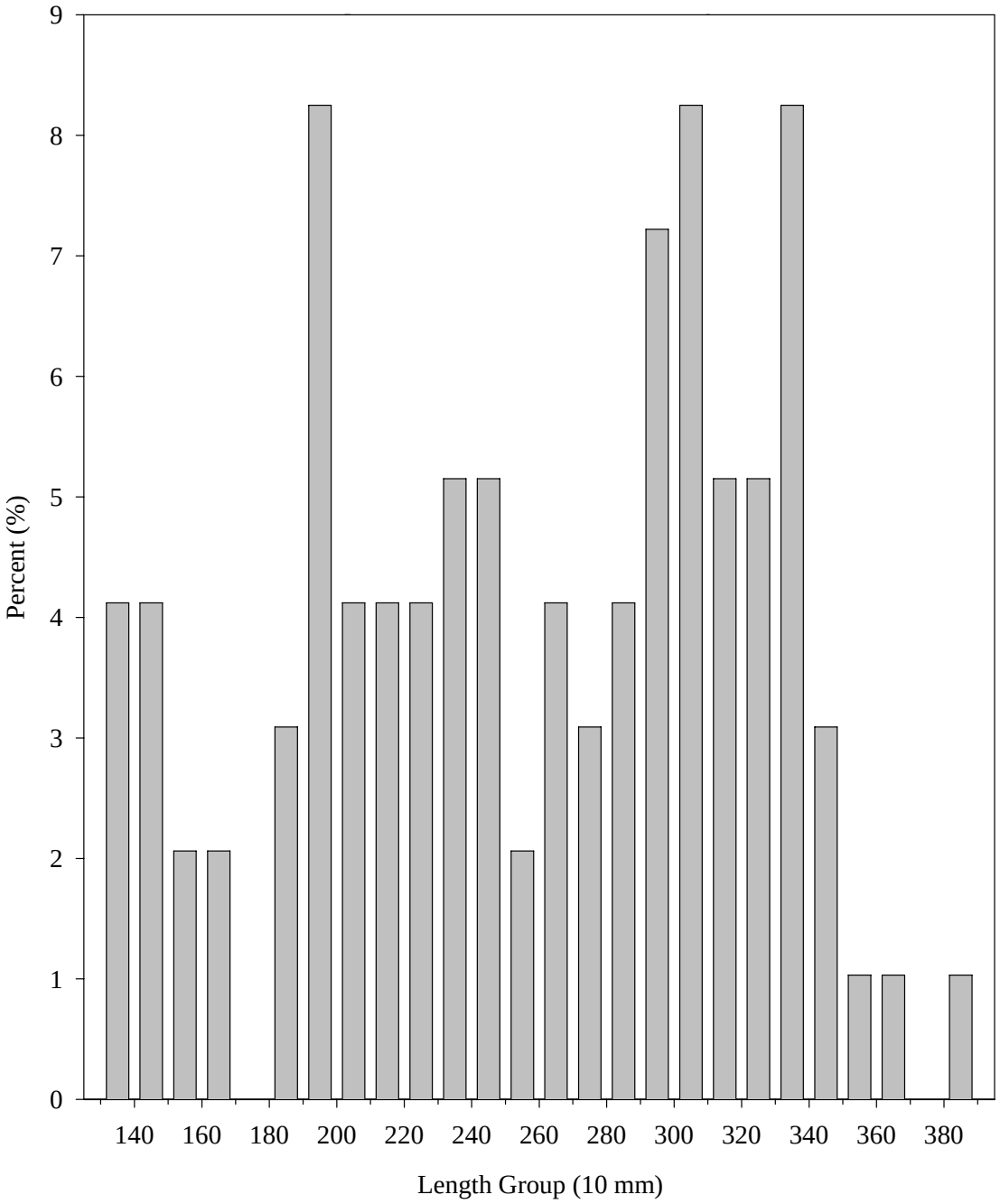

Figure 16. Length frequency histogram for gizzard shad collected by electrofishing from Jordan Reservoir, Spring 2005.

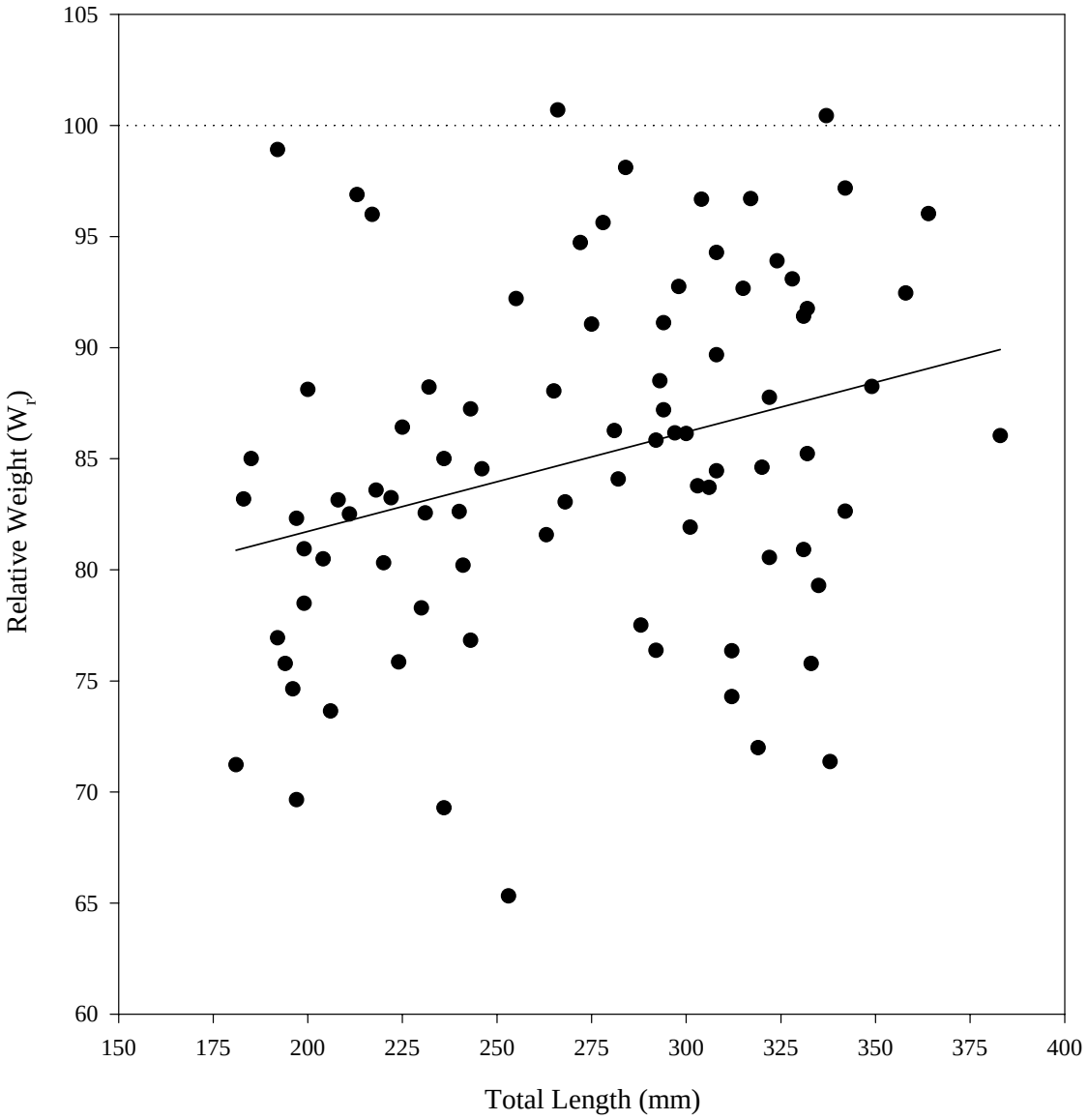

Figure 17. Relative weight of stock-size gizzard shad (N=85) collected from Jordan Reservoir, Spring 2005.

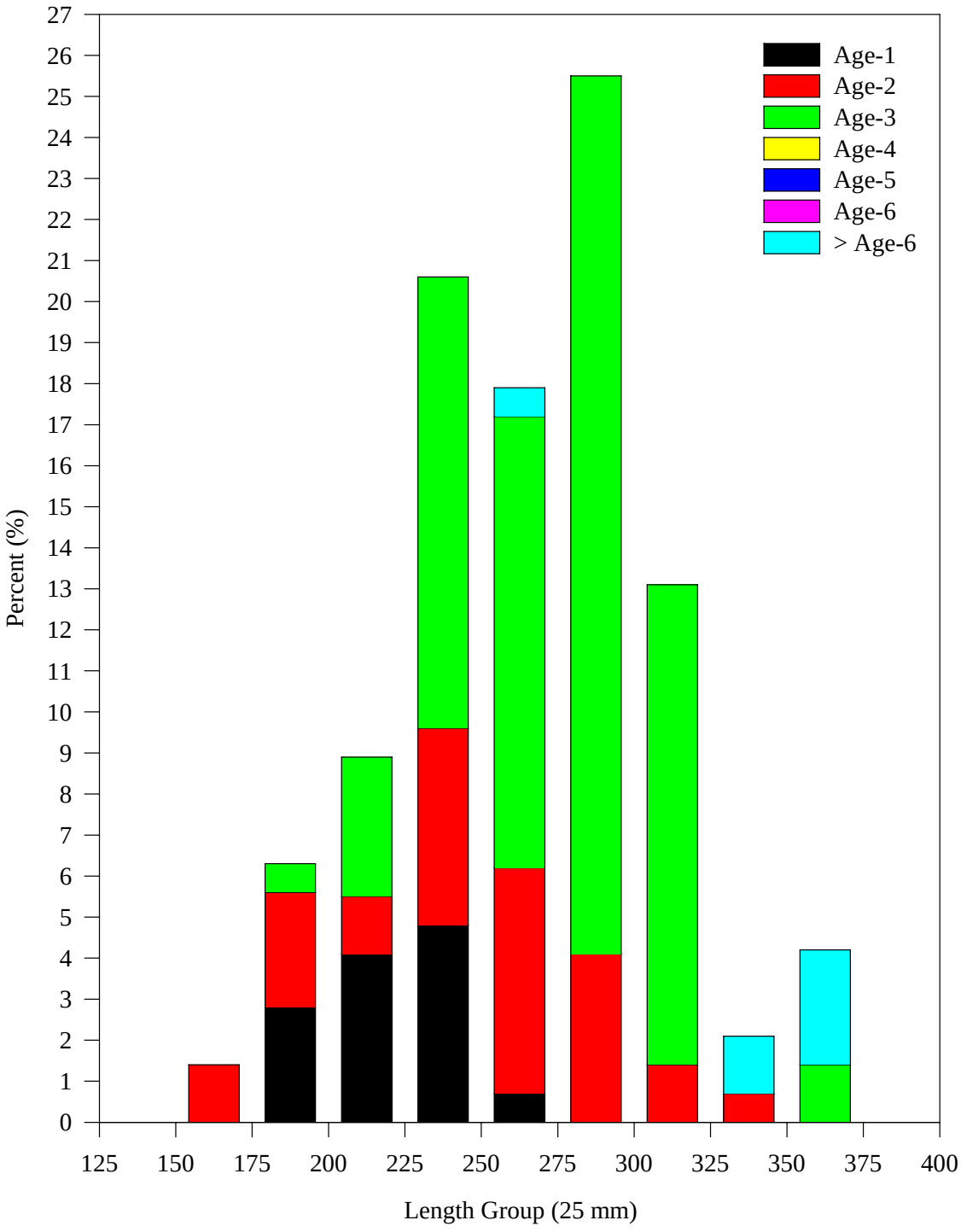

Figure 18. Length-at-age frequency of black crappie (N=145) collected from Jordan Reservoir, Fall 2004.

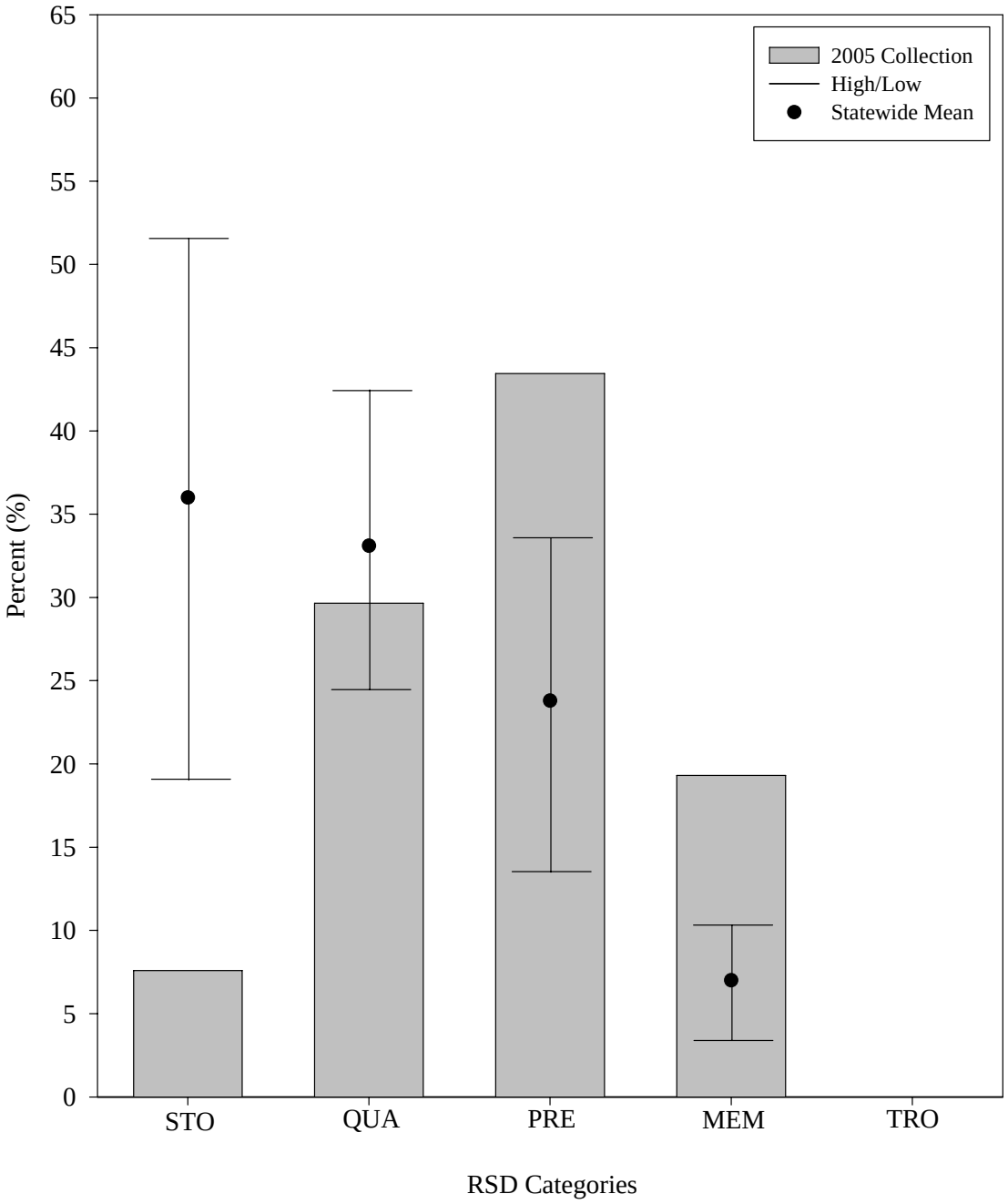

Figure 19. The relative stock densities (RSD) of black crappie in Jordan Reservoir, Fall 2004, and the statewide mean. The I-beams denote the 25th and 75th percentiles of RSD values of black crappie, statewide.

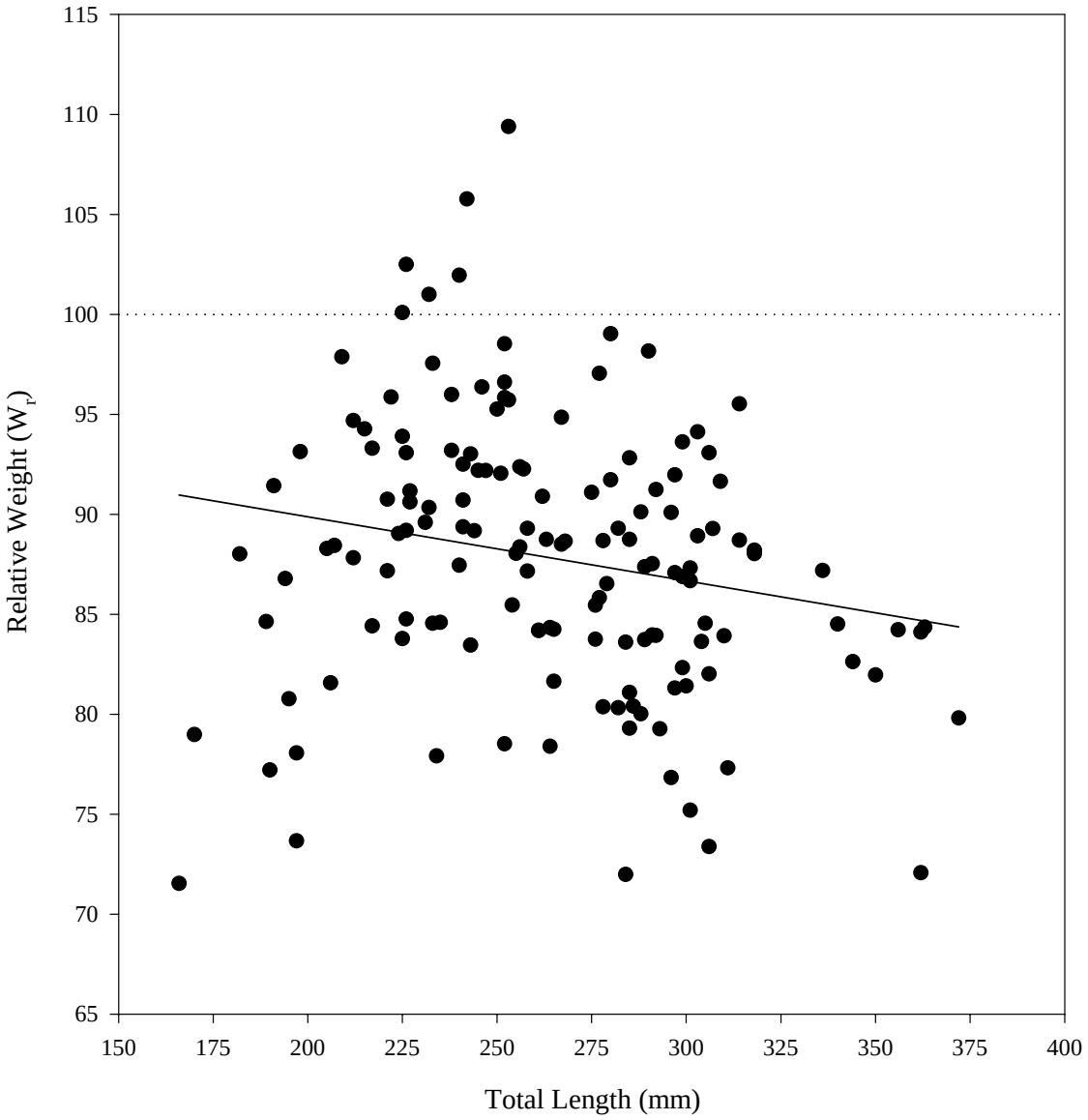

Figure 20. Relative weight of stock-size black crappie (N=145) collected from Jordan Reservoir, Fall 2004.

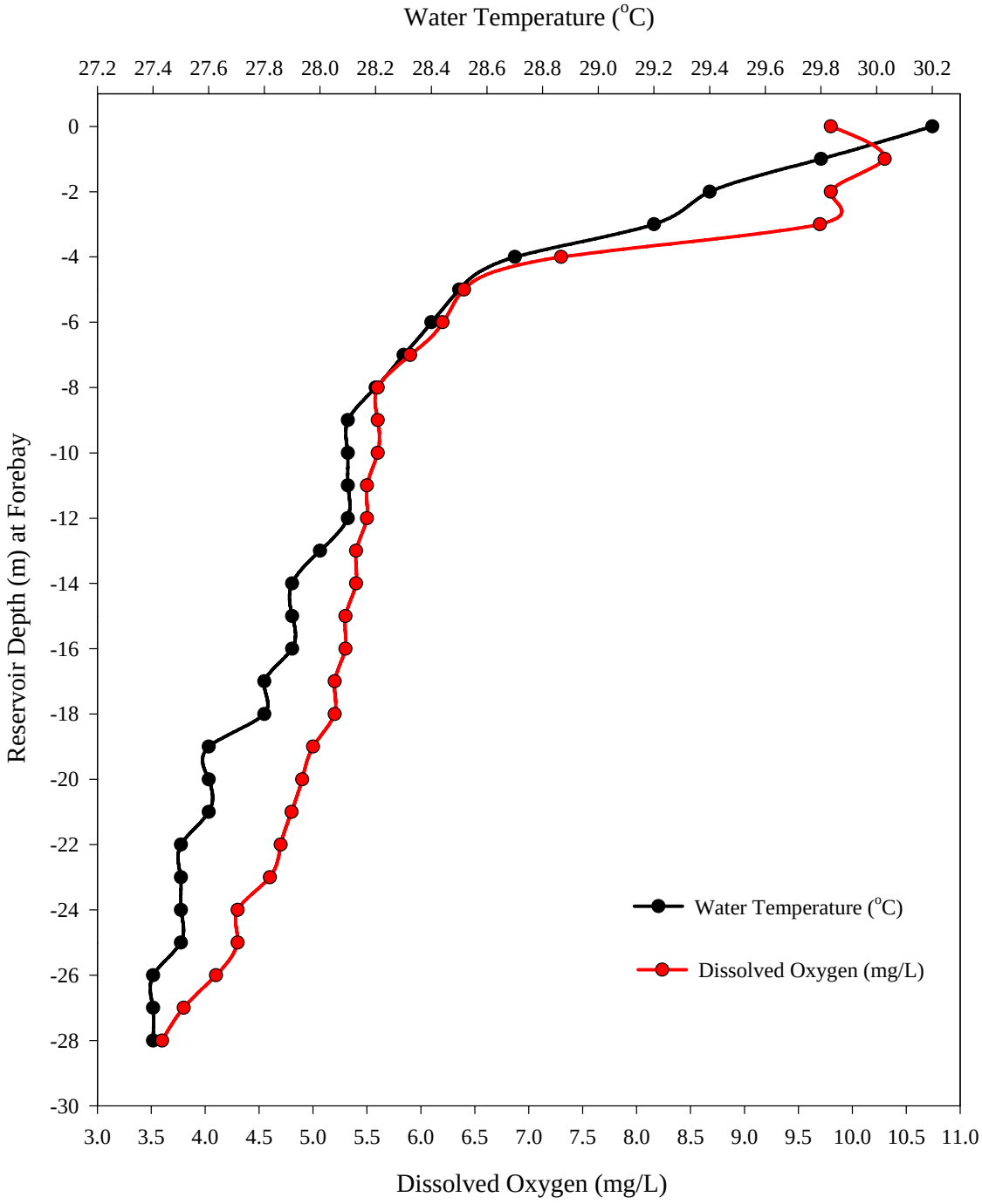

Figure 21. Temperature and dissolved oxygen profiles in the Jordan Dam forebay during July, 2005. Data were obtained from Alabama Power Company.

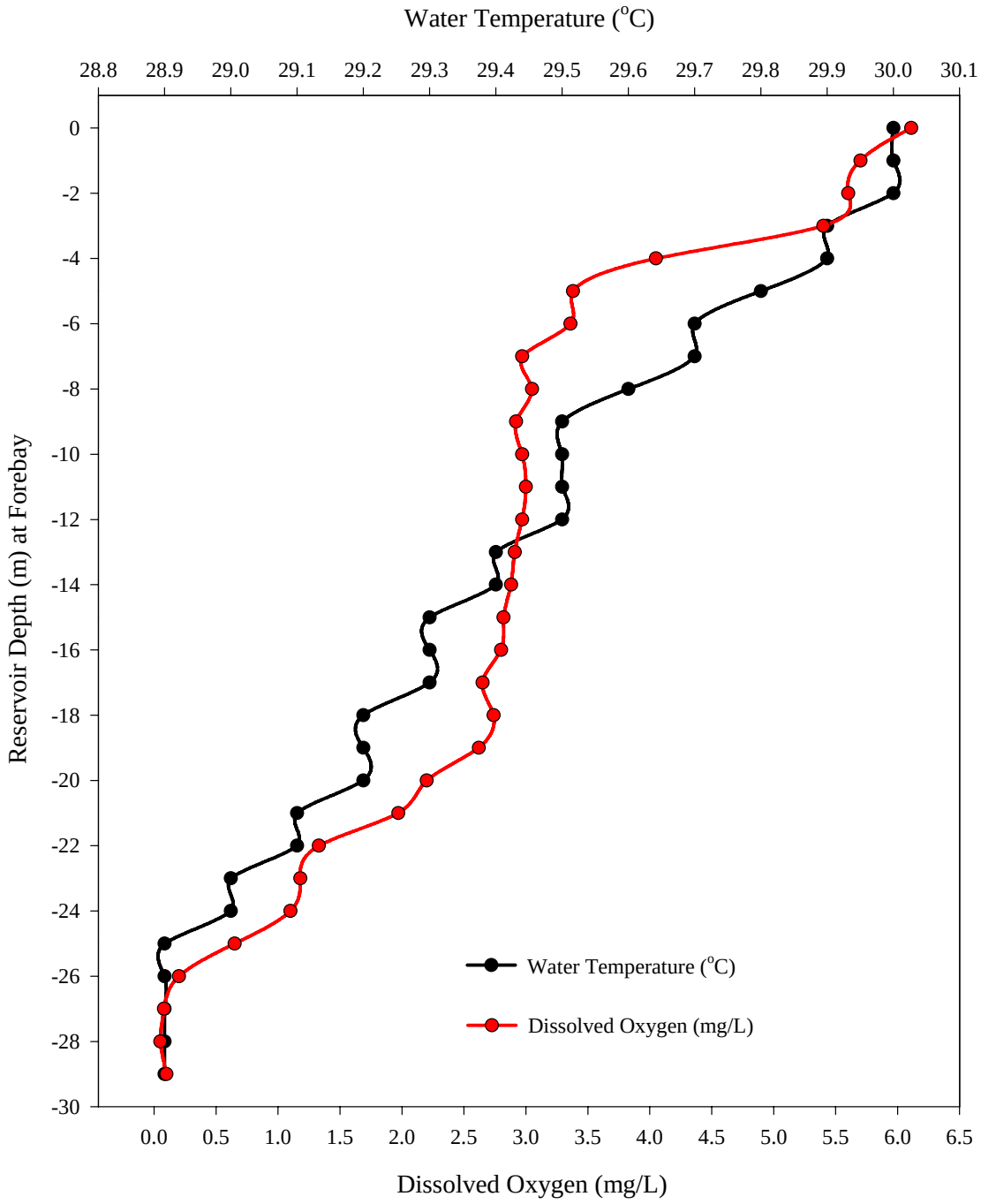

Figure 22. Temperature and dissolved oxygen profiles in the Jordan Dam forebay during August, 2005. Data were obtained from Alabama Power Company.